INTERNATIONAL
280-411/412/413/414 (IDT)
RETAIL TERMINAL

FIELD SERVICE AND   MS-5063
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Prepared by
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FOREWORD

International Distribution Totals (IDT) 280 Retail Terminals 280-411/412/413/414 are designed for use where numerous internal totals are required. The IDT terminals, like the international Phase II terminals (280-401/402/403/404), are point-of-sale input devices used to process transaction data associated with department, specialty, and discount store applications.

This supplement describes the differences between the IDT and the Phase II terminals. This description is accomplished by amending or supplementing the information contained in the Phase II FSTM (MS-5061). Each section of this supplement amends or supplements the corresponding section of MS-5061.

For reference, the following list defines the principal capabilities and features of the IDT terminal which are not present in the Phase II terminal.

- Distribution Totals — The IDT terminal contains 64 totals in addition to the totals contained in the Phase II terminal. The additional totals consist of control totals, transaction totals, summary totals, and department totals.
- Mnemonics — Additional core space is available for transaction and department mnemonics.
- Department Number Validation — All department number entries are checked against a table in core for legality.
- Department Selective Data Collection — Department numbers can be programmed so that item information for selected departments is not data collected.
- Selective Data Collection Hash Total — Amounts of items not data collected during a transaction are totaled in an itemizer. This hash total is transmitted at the end of each transaction.

- Inquiry Transaction — The operator can initiate an inquiry transaction to read or read and reset the department totals.
- Data Fields — All nonmonetary data fields, except the tax code, that have 13 digits maximum in the Phase II terminal have a maximum size of 14 digits in the IDT terminal.
- Discounts — A discount can be calculated on both the taxable and nontaxable itemizers in all IDT models. Discounting both itemizers is not permitted for Phase II models using the 761 for data collection.
- Programming Mode Printout — When writing into core during programming, data is printed on both journal and receipt. In the Phase II terminal, printing occurs only on the receipt.
- Remaining in Cashier Mode — The terminal can be programmed so that when in the cashier mode, it will remain in the cashier mode when powered down and then powered back up.
- Color Coded Tags — Tags containing fee, miscellaneous credit, and data information can be read at the nonmerchandise word. Data tags can be read at the miscellaneous data word.
- Data Collection of Positive and Negative Amounts — Amounts, including totals, can be programmed to be transmitted in their true value. A negative amount will be in complement form with the most significant digit being a 9.
- Communications Lockout — The terminal can be programmed to become inoperable with the COMM ALERT descriptor ON when a transaction is completed offline.
- Slip Release Option — With the terminal in the nonmerchandise sequence, the CLEAR key can be used to lift the print rolls enabling slip removal.

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SECTION A
INTRODUCTION

MODEL DEFINITION

Four additional 280 models are now available as a result of the release of the International Distribution Total (IDT) terminal. For convenience, the following list contains the Phase II as well as the new IDT model numbers.

280-401 Basic Phase II model using the 723 as a data collector.

280-402 Basic Phase II model using the 761 as a data collector.

280-403 Phase II 1/2 Penny model using the 723 as a data collector.

280-404 Phase II 1/2 Penny model using the 761 as a data collector.

280-411 Distribution Totals model using the 723 as a data collector.

280-412 Distribution Totals model using the 761 as a data collector.

280-413 Distribution Totals 1/2 Penny model using the 723 as a data collector.

280-414 Distribution Totals 1/2 Penny model using the 761 as a data collector.

The IDT terminals contain the same modules as the Phase II terminals with the exception of the TCU and the read/write memory. Phase II models can be field modified to IDT models by changing the TCU, read/write memory, and programming.

UNIT ORGANIZATION

Table A-1 lists the modules required for both the Phase II and IDT models. This table can be used as a reference when modifying a terminal from one model to another.

Figures A-1 and A-2 are block diagrams depicting the modules and remote units associated with each IDT model.

Module Number	Name	280-401	280-402	280-403	280-404	280-411	280-412	280-413	280-414
M01-01-280-006	Keyboard	X	X	X	X	X	X	X	X
M15-02-STD	TCU Logic	X	X	X	X	X	X	X	X
M15-01-280-006	TCU ROM	X							
M15-01-280-007	TCU ROM		X						
M15-01-280-004	TCU ROM			X					
M15-01-280-005	TCU ROM				X				
M15-02-280-012	TCU ROM					X			
M15-02-280-013	TCU ROM						X		
M15-02-280-017	TCU ROM							X	
M15-02-280-018	TCU ROM								X
M17-02-280-000	Read/Write Memory	X	X	X	X				
M17-03-STD	Read/Write Memory					X	X	X	X
M18-01-STD	TIC	X	X	X	X	X	X	X	X
M19-01-STD	Clock	X	X	X	X	X	X	X	X
M30-03-280-000	Misc. Components	X	X	X	X	X	X	X	X
M32-02-280	Power Supply*	X	X	X	X	X	X	X	X
M43-01-280	Printer*	X	X	X	X	X	X	X	X
50-02-280-000	TCA	X		X		X		X	
M51-01-STD	Modem	X		X		X		X	
M90-03-280-003	Display**	X	X			X	X		
M90-03-280-001	Display**	X	X	X	X	X	X	X	X

* See Table A-2 in MS-5061 for options available.
** Display 001 can replace display 003 in models 401, 402, 411, and 412 only if the terminal is programmed for inflated currency.

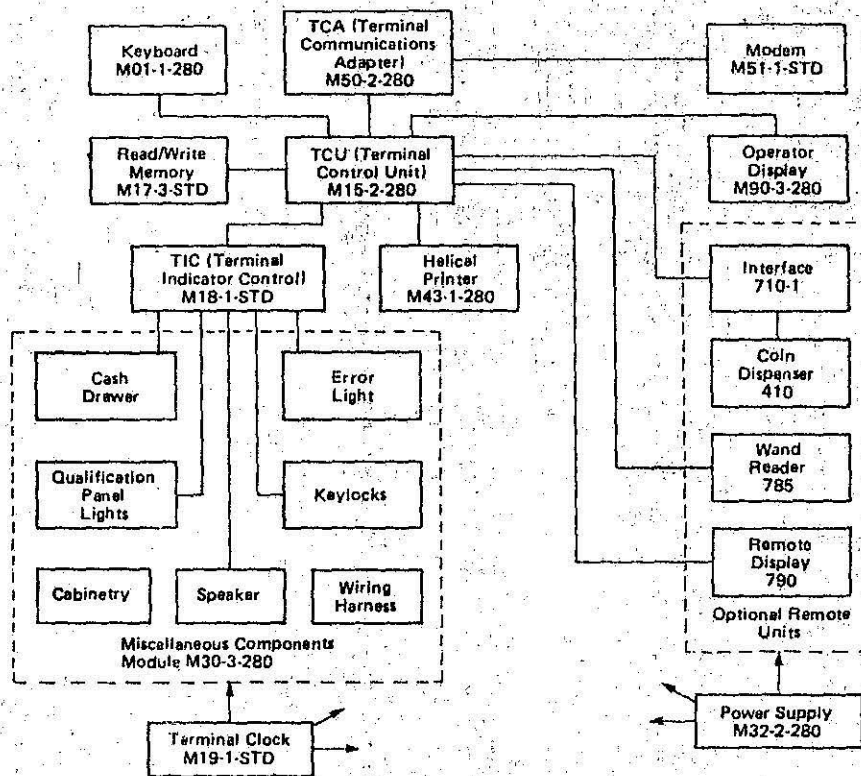Table A-1   Modules required for 280 models

Figure A-1

```
┌─────────────┐   ┌──────────────────┐                          ┌─────────────┐
│  Keyboard   │   │ TCA (Terminal    │                          │   Modem     │
│  M01-1-280  │   │ Communications   │                          │  M51-1-STD  │
│             │   │   Adapter)       │                          │             │
│             │   │  M50-2-280       │                          │             │
└─────────────┘   └──────────────────┘                          └─────────────┘

┌─────────────┐   ┌──────────────────┐                          ┌─────────────┐
│ Read/Write  │   │ TCU (Terminal    │                          │  Operator   │
│  Memory     │   │ Control Unit)    │                          │  Display    │
│  M17-3-STD  │   │  M15-2-280       │                          │  M90-3-280  │
└─────────────┘   └──────────────────┘                          └─────────────┘

   ┌──────────────────┐        ┌─────────────┐        ┌─────────────┐
   │ TIC (Terminal    │        │  Helical    │        │  Interface  │
   │ Indicator Control)│       │  Printer    │        │   710-1     │
   │  M18-1-STD       │        │  M43-1-280  │        │             │
   └──────────────────┘        └─────────────┘        └─────────────┘

   ┌────────────┐  ┌────────────┐                     ┌─────────────┐
   │   Cash     │  │   Error    │                     │    Coin     │
   │   Drawer   │  │   Light    │                     │  Dispenser  │
   │            │  │            │                     │     410     │
   └────────────┘  └────────────┘                     └─────────────┘

   ┌────────────┐  ┌────────────┐                     ┌─────────────┐
   │Qualification│ │            │                     │    Wand     │
   │   Panel     │ │  Keylocks  │                     │   Reader    │
   │   Lights    │ │            │                     │     785     │
   └────────────┘  └────────────┘                     └─────────────┘

   ┌────────┐ ┌────────┐ ┌────────┐                   ┌─────────────┐
   │Cabinetry│ │Speaker │ │ Wiring │                  │   Remote    │
   │         │ │        │ │ Harness│                  │   Display   │
   └────────┘ └────────┘ └────────┘                   │     790     │
                                                       └─────────────┘
     Miscellaneous Components                          Optional Remote
     Module M30-3-280                                        Units

        ┌──────────────┐                              ┌─────────────┐
        │Terminal Clock│                              │Power Supply │
        │  M19-1-STD   │                              │  M32-2-280  │
        └──────────────┘                              └─────────────┘
```

Figure A-1 Organization block diagram, models 280-411 and 280-413

Figure A-2

```
┌─────────────┐   ┌──────────────┐     Remote
│  Keyboard   │   │  Cassette    │      Unit
│  M01-1-280  │   │  Terminal    │
│             │   │  Recorder    │
│             │   │     761      │
└─────────────┘   └──────────────┘

┌─────────────┐   ┌──────────────────┐                    ┌─────────────┐
│ Read/Write  │   │ TCU (Terminal    │                    │  Operator   │
│  Memory     │   │ Control Unit)    │                    │  Display    │
│  M17-3-STD  │   │  M15-2-280       │                    │  M90-3-280  │
└─────────────┘   └──────────────────┘                    └─────────────┘

   ┌──────────────────┐        ┌─────────────┐        ┌─────────────┐
   │ TIC (Terminal    │        │  Helical    │        │  Interface  │
   │ Indicator Control)│       │  Printer    │        │   710-1     │
   │  M18-1-STD       │        │  M43-1-280  │        │             │
   └──────────────────┘        └─────────────┘        └─────────────┘

   ┌────────────┐  ┌────────────┐                     ┌─────────────┐
   │   Cash     │  │   Error    │                     │    Coin     │
   │   Drawer   │  │   Light    │                     │  Dispenser  │
   │            │  │            │                     │     410     │
   └────────────┘  └────────────┘                     └─────────────┘

   ┌────────────┐  ┌────────────┐                     ┌─────────────┐
   │Qualification│ │            │                     │    Wand     │
   │   Panel     │ │  Keylocks  │                     │   Reader    │
   │   Lights    │ │            │                     │     785     │
   └────────────┘  └────────────┘                     └─────────────┘

   ┌────────┐ ┌────────┐ ┌────────┐                   ┌─────────────┐
   │Cabinetry│ │Speaker │ │ Wiring │                  │   Remote    │
   │         │ │        │ │ Harness│                  │   Display   │
   └────────┘ └────────┘ └────────┘                   │     790     │
                                                       └─────────────┘
     Miscellaneous Components                          Optional Remote
     Module M30-3-280                                        Units

        ┌──────────────┐                              ┌─────────────┐
        │Terminal Clock│                              │Power Supply │
        │  M19-1-STD   │                              │  M32-2-280  │
        └──────────────┘                              └─────────────┘
```
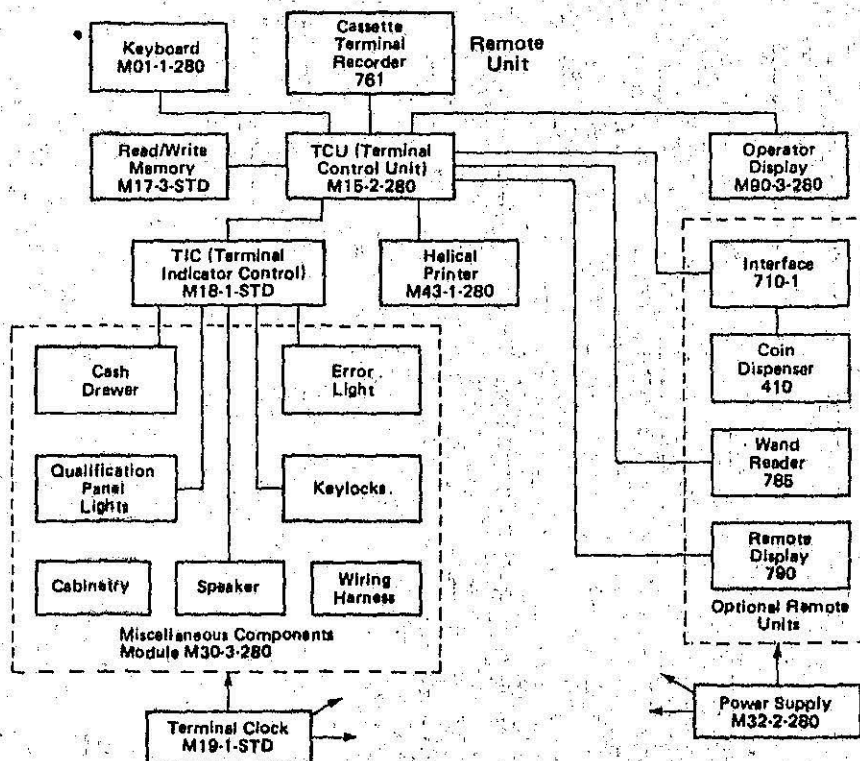
Figure A-2 Organization block diagram, models 280-412 and 280-414

TRANSACTION TYPES

The IDT terminal is capable of performing all Phase II terminal transactions and, in addition, can perform an inquiry transaction to read or read and reset department totals. The closing transaction description varies from that of the Phase II terminal only because of the additional totals involved.

CLOSING

The closing transaction is used to read or reset the 280 totals at the end of the business day. During the closing transaction, a cash count of the cash drawer contents may be calculated by indexing the quantity times the denomination of coins, paper currency, and checks contained in the drawer. The total of the cash count is displayed and printed. The sales, returns, control, transaction, and summary totals are printed but not displayed. A cash total reflecting the cash receipts for the day may also be printed during a closing transaction. The printing of the cash total is optional through programming. This transaction resets the media counter when the totals are reset. The sales total may be programmed to be nonresettable.

INQUIRY

An inquiry transaction is available to enable the operator to access the contents of the department totals. The department totals may be printed or printed and reset during this transaction. The inquiry transaction is selected by using qualification code 46.

DISCOUNT CALCULATIONS

Programming for calculation of discount on both taxable and nontaxable itemizers is permitted for all IDT models. The Phase II models using the 761 for data collection can discount only one itemizer at a time.

SELECTIVE DATA COLLECTION

The IDT terminal can be programmed to provide department selective communications; i.e., merchandise item entries of selected departments are not data collected. The department number does not have to be the first entry in the transaction sequence when using this feature. Only merchandise entries made through the keyboard can be selectively data collected.

The department selective communications feature does not affect the capability of the terminal to provide selective data collection of short sequence item entries. The short sequence selective communications feature is available in both the Phase II and IDT terminals.

ITEMIZERS AND TOTALS

In addition to the totals contained in the Phase II terminal, the IDT terminal contains 64 distribution totals. Table B-1 lists the totals.

No. of Totals	Total Name	No. of Digits Per Total
7	Control	10
8	Transaction	10
2	Summary	10
47	Department	8

Table B-1 Distribution Totals

CONTROL TOTALS

The seven control totals in the IDT terminal listed in table B-2.

Name	*Sample Mnemonic
Discount	DIS
Fee	FEE
Miscellaneous Credit	MSC
Item Corrected Amounts	ERR
Tax	TAX
Checks Tendered	CTD
Deposit	DEP
* The mnemonics are programmable.	

Table B-2 Control totals

The control totals contain 10 digits each and have an accumulating capacity of +89,999,999.99 and -10,000,000.00. Each control total has an associated eight-digit itemizer. The itemizers have capacities of +899,999.99 and -100,000.00. The capacities for the totals and itemizers cannot be exceeded without causing errors. The deposit total does not have a separate itemizer but uses the Phase II Deposit total (word 64, Sector "0") as the itemizer. Amounts are accumulated in the itemizers as they are entered. The control totals are not updated until the end of the transaction. Amounts entered in transactions that are aborted are not accumulated in the control totals. During the closing transaction, the control totals are printed or printed and reset depending upon the position of the read or reset key. If the totals are read or reset, they are transmitted to the data collector.

All control totals with the exception of checks tendered are net totals. Amounts in favor of the store are added and amounts in favor of the customer (e.g., return transactions) are subtracted. The checks tendered total is a gross total to which all checks tendered are added.

TRANSACTION TOTALS

There are eight transaction totals in the IDT terminal. The transaction totals contain 10 digits each and have an accumulating capacity of +89,999,999.99 and -10,000,000.00. The totals accumulate amounts for the various types of transactions. Each total is associated with particular qualification codes. At the end of a transaction, the totals are updated by the net amount of the transaction. Therefore, separate itemizers are not required. The net total of the sum of the taxable and nontaxable itemizers is used to update the totals. Itemization is limited to +899,999.99 and -100,000.00.

Table B-3 lists the transaction totals along with their associated qualification codes and identifying mnemonics. All transaction totals are net totals with the exception of "received on account." All amounts entered under qualification code 14 are added to this total.

Amounts entered in transactions that are aborted are not accumulated in the transaction totals. During the closing transaction, the transaction totals are printed or printed and reset depending upon the position of the read or reset key. If the totals are read or reset, they are transmitted to the data collector.

Transaction	Qualification Code	*Sample Mnemonic
Cash Sales	1,2,20,30	CSH 1
Store Charge Sales	0,3,4,5,21,22,23, 24,25,31,32,33,34, 35,40,41	CHG 1
Received on Account	14	ROA
Layaway and C.O.D.	10,11	COD LWY
Bank Card Charge Sales	6,7,26,27,36,37	CHG 2
Miscellaneous Cash Sales	16	CSH 2
Miscellaneous Charge Sales	15,17	CHG 3
Return Sales and Exchanged Merchandise	20,21,22,23,24,25, 26,27,30,31,32,33, 34,35,36,37	RTN
* The mnemonics are programmable except for the numerals which are fixed by firmware.		

Table B-3 Transaction totals

SUMMARY TOTALS

The summary totals consist of the net sales total and the net merchandise total. These two totals are calculated by the terminal when the control and transaction totals are read or reset. The summary totals contain 10 digits each and have an accumulating capacity of +89,999,999.99 and -10,000,000.00. During the closing transaction, the summary totals are printed and transmitted for data collection.

NET SALES TOTAL

The net sales total is calculated by adding the following transaction totals.

- Cash sales
- Store charge sales
- Layaway and C.O.D.
- Bank card charge sales
- Miscellaneous cash sales
- Miscellaneous charge sales

NET MERCHANDISE TOTAL

The net merchandise total is calculated by adding the miscellaneous credit total to the net sales total and then subtracting the sum of the tax and fee totals.

DEPARTMENT TOTALS

There are 47 department distribution totals in the IDT terminal. Each total contains eight digits and has an accumulating capacity of +899,999.99 and -100,000.00. The department totals do not have associated itemizers. Amounts are accumulated into the totals as they are entered during a transaction.

The department item amounts are distributed by a programmable table in sector "2" of the read-write memory. For each item, the table validates the department number and identifies the total number for that department. The department totals are located in sector "3" of the read-write memory. The department totals may be read or read and reset during an inquiry (qualification code 46) transaction.

CLOSING AND INQUIRY PRINTOUTS

Figures B-1 and B-2 illustrate sample closing and inquiry transaction receipt printouts.

```
          YOUR RECEIPT
          THANK YOU

 440/8      280    333    55

        1 DIS            2610.12
        2 FEE               2.15-
        3 MSC               3.55
        4 ERR              50.23
        5 TAX             935.91
        6 CTD             588.00
        7 DEP              12.34
        8 CSH  1         8436.76
        9 CHG  1         1268.39
       10 ROA              45.63
       11 COD  LWY         36.02
       12 CHG  2           40.08
       13 CSH  2          174.03
       14 CHG  3           35.97
       15 RTN              51.16
       16 NT SLE         9991.25
       17 NT MDS         9061.04
                         8668.76 CSH
                        10069.24 SLE
                            76.76 RTN

 9/5/73     44              .00 TTL
```

Control Totals (1–7)
Transaction Totals (8–15)
Summary Totals (16–17)
Basic Hard Totals

Figure B-1 Sample closing receipt printout

```
          YOUR RECEIPT
          THANK YOU

 249/4        1      333    55

 44     D  9             136.30
 256    D 13              68.81
 347    D 14              25.40-
 258    D 13              68.81
 369    D 14              25.40-
 357    D 14              25.40-
                        197.72 STL

 4/03/74    46              .00 TTL
```

Figure B-2 Sample inquiry receipt printout

PRINTER MNEMONICS

Four additional sets of basic mnemonics are available in the IDT terminal as follows.

Mnemonic Number	Sample Mnemonics (English)	Identifier
31	D	Department
32	RTN	Returns
33	NT SLE	Net Sales total
34	NT MDS	Net Merchandise total

Mnemonic number 31 is used when the department totals are printed during an inquiry transaction. Number 32 is used when printing the transaction total "return sales and exchanged merchandise" during a closing transaction. Numbers 33 and 34 are used when printing the summary totals "net sales total" and "net merchandise total" during a closing transaction. These mnemonics are programmable.

COLOR CODED TAGS

The Phase II terminal accepts information from color coded tags at the first merchandise entry point or when the terminal requests identification or account numbers. In addition to these

...bilities, the IDT terminal accepts color coded ... inputs at the miscellaneous data word in the merchandise sequence and at the nonmerchandise word. The entries which can be made at the nonmerchandise word are fee type and amount, miscellaneous credit type and amount, and data.

Data entered at either the miscellaneous data word in the merchandise sequence or at the nonmerchandise word consists of a clerk identfication number or a customer account number. This data is read from tag types 6 and 7 listed in table B-1 of MS-5061.

Two additional tag types are required for entry of fee and miscellaneous credit information. These tags are designated type A for fee information and type B for miscellaneous credit information. The message formats for tag types A and B are illustrated in Figure B-3.

The entry of fee information, miscellaneous credit information, and data by reading color coded tags can be programmed legal or illegal. There is one legality bit in the read/write memory for fee tags, one for miscellaneous credit tags, and two for data tags. One of the data tag bits controls the legality of data entry at the miscellaneous data word in the merchandise sequence and the second bit controls the legality of data entry at the nonmerchandise word.

Before reading fee or miscellaneous credit tags, the operator may enter a quantity of 1 or 2 digits to obtain an item extension of the amount on the tag.

After the reading of color coded tags, the printout, data collection, and next terminal function are the same as if the information had been entered through the keyboard.

Tag Type "A"	Fee Type 0-14 Digits	U S	Fee Amount 1-7 Digits

Tag Type "B"	Misc. Credit Type 0-14 Digits	U S	Misc. Credit Amount 1-7 Digits

Figure B-3 Message formats, tag types A and B

QUALIFICATION CODES

Reference table C-2 in MS-5061. Qualification code 46 must be changed from "BANK CHG" to "TOTALS INQUIRY." This is the qualification code used to initiate a department totals inquiry transaction in the IDT terminal.

DEPARTMENT TOTALS INQUIRY TRANSACTION

This transaction enables the operator to access the department totals. The totals may be read or read and reset individually or in a "dump." To initiate an inquiry transaction, the read or reset key must first be inserted and turned to the desired position. Qualification code 46 is then entered. Entry of qualification code 46 causes the ID No. descriptor to light and the operator enters his identification number. After entry of the identification number, the DEPT. descriptor lights. The operator then enters the department number associated with the desired total. This causes the 280 to print or print and reset (depending upon the position of the read or reset key) the selected department total. Additional department numbers may then be entered to access other totals. The terminal may be programmed so that the department totals are accessed by entry of the total number (1-47) instead of the department number.

If more than one department number is associated with the same total and the read or reset key is in the READ position, the total will be printed each time a department number associated with that total is entered. If the reset key is in the RESET position, the total will print only for the first department number entered. Entry of subsequent department numbers associated with the total will print a zero amount.

To exit the inquiry transaction, the operator must first turn the read or reset key to the NORMAL position and then press the TOTAL key.

A "dump" of all 47 department totals can be accomplished any time during the inquiry transaction by pressing the TOTAL key with the read or reset key still in the READ or RESET position. The terminal will then print or print and reset all 47 totals.

OPERATION FLOW

The operation flow for the IDT terminal is the same as that for the Phase II terminal except for the additional inquiry transaction. Figure C-1 illustrates the operation flow for the inquiry transaction.
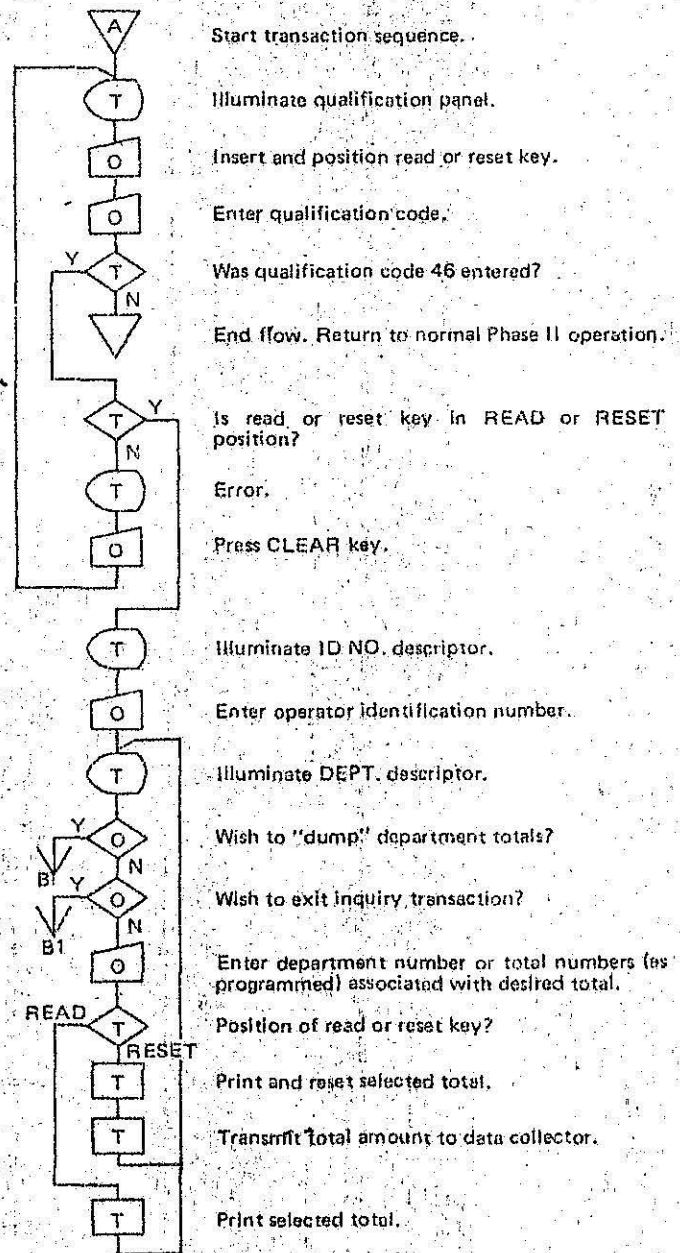

Start transaction sequence.

Illuminate qualification panel.

Insert and position read or reset key.

Enter qualification code.

Was qualification code 46 entered?

End flow. Return to normal Phase II operation.

Is read or reset key in READ or RESET position?

Error.

Press CLEAR key.

Illuminate ID NO. descriptor.

Enter operator identification number.

Illuminate DEPT. descriptor.

Wish to "dump" department totals?

Wish to exit inquiry transaction?

Enter department number or total numbers (as programmed) associated with desired total.

Position of read or reset key?

Print and reset selected total.

Transmit total amount to data collector.

Print selected total.

Figure C-1 Inquiry transaction operation flow (line A)

Press TOTAL key.

Position of read or reset key?

Print and reset all 47 department totals.

Transmit all total amounts to data collector.

Print all 47 department totals.

Turn read or reset key to NORMAL position.

Press TOTAL key.
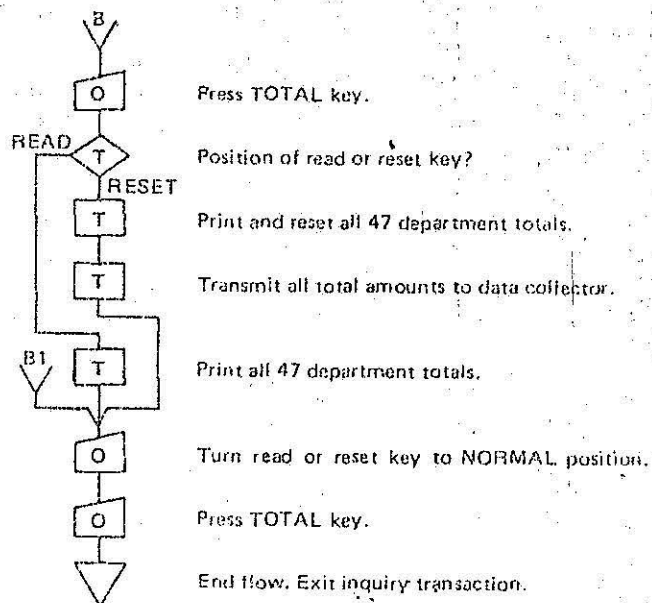
End flow. Exit inquiry transaction.

Figure C-1 Inquiry transaction operation flow (line B)

SECTION D
PROGRAMMING

INTRODUCTION

The principal differences in programming between the Phase II and IDT terminals are in the area of mnemonics. The IDT terminal has increased core space which can be used for the programming of department mnemonics, expanded department mnemonics, and transaction type mnemonics.

DEPARTMENT MNEMONICS

Department mnemonics are used to identify the department associated with each item entry during a transaction. These mnemonics are located in Sector "2" and may be programmed to print on the same line as the item information or on the following line. With the exception of the price field, the department mnemonic is the last item information field loaded into the printer buffer. Therefore, the department mnemonic will cancel any other item information characters programmed for the same print columns. Two examples of the use of department mnemonics are as follows:

| 630 | 13 | 614780 | 1.00 | 4.75 | AUTO |

Print on same line.

| 630 | 13 | 614780 | 1.00 | | MDS |
| AUTO | | | | 4.75 | |

Print on separate line.

EXPANDED DEPARTMENT MNEMONICS

Expanded department mnemonics are used for the same purpose as department mnemonics. However, additional core space is available when using expanded department mnemonics to enable the use of longer mnemonics. Also, two mnemonic sets may be combined to form one mnemonic. These mnemonics are located in both Sectors "1" and "2." Because of the mnemonic length, expanded department mnemonics are normally programmed to print on a separate line. An example of the use of expanded department mnemonics is as follows.

| 381 | 16 | 374191 | 1.00 | | MDS |
| SHOES/LADIES | | | | 16.99 | |

TRANSACTION TYPE MNEMONICS

The transaction type mnemonics, located in Sector "2," are used to replace or expand the basic transaction type mnemonics in Section "1." This enables the use of more descriptive mnemonics for the various types of transactions. For example, the basic transaction type mnemonic for qualification code 6 is CHG. By proper programming of the transaction type mnemonics in Sector "2," the footer print out for this transaction could be as follows.

| 6/12/74 | 6 | BNK CHG | 14.98 | TTL |

MEMORY ORGANIZATION

The IDT terminal has four memory sectors compared with two sectors for the Phase II terminal. Each sector contains 256 eight-bit characters for a total of 1,024 characters in the IDT terminal. Figures D-1 through D-4 illustrate the word locations in the four sectors. A core map for the IDT terminal is contained in Tables D-2 through D-5. Three sample programs for the IDT terminal are provided in the Appendix for reference.

TRANSACTION CONTROL WORDS

In the third character of all transaction control words, bits 1 through 4 contain the binary configuration of the maximum number of digits that may be entered for the associated data field. For the Phase II terminal, the maximum number of digits is 13 unless otherwise specified. For the IDT terminal, all nonmonetary data fields, except the

Octal Location - Last Digit ⟶

	0	1	2	3	4	5	6	7 / 0	1	2	3	4	5	6	7
00/01															
02/03															
04/05															
06/07															
10/11															
12/13															
14/15															
16/17															
20/21							Cont. 5	Cont. 6						Hash	
22/23	Total Itemizer, Store Account No., Work Register 3, CCTR Quantity														
24/25															
26/27						Control Total Itemizers									
30/31	Control Total Itemizers														
32/33					Control Totals										
34/35	Control Totals														
36/37															

Note: Only words which differ from Phase II are shown.

Figure D-1 Word layout, sector "0"

Octal Location - Last Digit ⟶

	0	1	2	3	4	5	6	7 / 0	1	2	3	4	5	6	7
00/01															
02/03															
04/05															
06/07															
10/11															
12/13					Programmable Mnemonics									Department	
14/15	Returns		Programmable Mnemonics Net Sales			Net Merchandise				Mnemonics Expansion,					
16/17	Expanded Department Mnemonics, Cassette Label														
20/21	Mnemonics Expansion, Expanded Department Mnemonics,														
22/23	Cassette Label				Total No. Print Addresses										
24/25															
26/27															
30/31															
32/33															
34/35															
36/37															

Note: Only words which differ from Phase II are shown.

Figure D-2 Word layout, sector "1"

Octal Location 1st Two Digits ↓

Octal Location - Last Digit →

	0	1	2	3	4	5	6	7	/	0	1	2	3	4	5	6	7
00/01																	
02/03																	
04/05																	
06/07																	
10/11																	
12/13																	
14/15																	
16/17																	
20/21																	
22/23																	
24/25	Not Used																
26/27																	
30/31																	
32/33																	
34/35																	
36/37														Print Address	Start Address	Check Digit	Sector Cont.

Department Table — Transaction Type Mnemonics — Department Mnemonics — Expanded Department Mnemonics

Figure D-3   Word layout, sector "2"

Octal Location 1st Two Digits ↓

Octal Location - Last Digit →

	0	1	2	3	4	5	6	7	/	0	1	2	3	4	5	6	7
00/01	Dept. Total No. 1																
02/03																	
04/05																	
06/07																	
10/11																	
12/13																	
14/15																	
16/17																	
20/21																	
22/23																	
24/25																	
26/27											Dept. Total No. 47					Not Used	
30/31	Not Used					Checks Tendered			Totals Itemizers	Exchange				Control			
32/33	And Transaction Totals																
34/35	Control and Transaction Totals																
36/37	Control and Transaction Totals															Sector Cont.	

Department Totals

Figure D-4   Word layout, sector "3"

...code, that have 13 digits maximum in the Phase II terminal have a maximum of 14 digits in the IDT terminal.

SECTOR "0" WORD DESCRIPTIONS

WORD 50
OPTION CONTROL 5
(LOCATION 210)

Bits 1 through 5 of this word specify, in binary, the print column address for the department mnemonics. The department mnemonic is left justified to this address. Department mnemonics are printed with each department entry during a transaction. This print address applies to both the basic department mnemonics programmed in Sector "2" and the expanded department mnemonics programmed in Sectors "1" and "2." When selecting a department mnemonic print address, it is important to understand that, with the exception of the price field, the department mnemonic is the last field of item information loaded into the print buffer. Therefore, it will cancel any other information programmed for the same print columns.

Bit 6, when set (1), causes the terminal, when in the cashier mode, to remain in the cashier mode when powered down and then powered back up. When bit 6 is reset (0), the terminal transfers to the clerk mode after power down and power up.

Bit 7, when set (1), causes the terminal to become inoperative when a transaction is completed offline. The terminal must be powered down and then powered back up to become operational in the offline mode. When bit 7 is reset (0), the terminal is immediately ready for offline operation when a transaction is completed offline.

Bit 8, when set (1), causes negative amounts, including totals, to be transmitted in complement form with the most significant digit being a 9. When bit 8 is reset (0), amounts are transmitted in absolute form (negative amounts are not in complement form).

WORD 50A
OPTION CONTROL 6
(LOCATION 211)

Bit 1, when set (1), enables the use of the CLEAR key to lift the print rolls at the slip printing station, permitting slip removal. The rolls remain lifted until any keyboard entry resulting in a printout. This feature is operational only if a slip is inserted and no other key has been pressed prior to the CLEAR key in the nonmerchandise sequence. If bit 1 is reset (0), the feature is disabled.

Bit 2, when set (1), causes department mnemonics to be printed on the slip only. If bit 2 is reset (0), department mnemonics are printed at all three print stations.

Bit 3, when set (1), requires that the department totals sequence number (1-47) be entered to access an individual department total during the inquiry transaction. If bit 3 is reset (0), a department number associated with the desired total must be entered.

Bit 4, when set (1), causes the department mnemonic and item price to be printed on the line following the item information. If bit 4 is reset (0), the department mnemonic and price are printed on the same line as the item information.

Bit 5, when set (1), prohibits the entry of data from a tag when the DATA descriptor is lit during a merchandise sequence. When bit 5 is reset (0), tags may be read at this point.

Bit 6, when set (1), prohibits the entry of data from a type 6 or 7 tag when the terminal is at the nonmerchandise word. When bit 6 is reset (0), type 6 or 7 tags may be read at this point.

Bit 7, when set (1), prohibits the entry of data from a miscellaneous credit (type B) tag when the terminal is on the nonmerchandise word. When bit 7 is reset (0), type B tags may be read at this point.

Bit 8, when set (1), prohibits the entry of data from a fee (type A) tag when the terminal is on the nonmerchandise word. When bit 8 is reset (0), type A tags may be read at this point.

WORD 55
SELECTIVE DATA COLLECTION
HASH TOTAL ITEMIZER,
ACCOUNT NUMBER STORAGE,
WORK REGISTER #3,
AND CCTR QUANTITY
(LOCATIONS 216-233)

This word is the same as that for the Phase II terminal except for the addition of the selective data collection hash total itemizer which uses locations 216-221.

WORD 67
CONTROL TOTAL ITEMIZERS
(LOCATIONS 266-311)

This word contains itemizers for five of the control totals: discount, fee, miscellaneous credit, item corrected amount, and tax. Each itemizer has an eight digit capacity.

WORD 74
CONTROL TOTALS
(LOCATIONS 327-357)
This word contains five of the control totals: discount, fee, miscellaneous credit, item corrected amount, and tax. Each total has a ten digit capacity.

SECTOR "1" WORD DESCRIPTIONS

WORD 79
MNEMONICS
(LOCATIONS 000-151, SECTOR 1)
This word is the same as word 79 in the Phase II terminal except that the locations have been expanded to include four additional mnemonics for totals identification.

WORD 80
MNEMONICS EXPANSION,
EXPANDED DEPARTMENT MNEMONICS,
CASSETTE LABEL
(LOCATIONS 152-227, SECTOR 1)
This word can be used to expand the basic mnemonics contained in word 79, enter expanded department mnemonics if transaction mnemonics are not used in Sector "2," and enter a 761 cassette label if required.

Expansion of the basic mnemonics can use locations 152 up to the start of the cassette label or expanded department mnemonics. If a cassette label and expanded department mnemonics are not used, locations 152 through 227 are available for basic mnemonics expansion. Although the basic mnemonics in word 79 can be programmed to change characters and shorten or lengthen the mnemonic, the order or sequence of the mnemonics cannot be changed. If a particular basic mnemonic is not required, an ASCII "space" with bit 8 set (octal 240) must be programmed in the proper sequence for that mnemonic.

If transaction type mnemonics are not used in Sector "2," expanded department mnemonics can be programmed into this word. The expanded department mnemonics must start immediately following the basic mnemonics and be assigned sequence numbers consecutive with those of the basic mnemonics. For example, the first expanded department mnemonic sequence number would be 35. The sequence numbers are used when programming the department table in Sector "2." The expanded department mnemonics may continue up to the start of the cassette label or, if a cassette is not used, all locations through 227 may be used. See word 85 for a further description of expanded department mnemonics.

If a cassette is used with the 280, a label containing at least one character must be programmed. The starting address of the label must be programmed, in octal, in location 217. The label may start in any location following the basic mnemonics or expanded department mnemonics and must end in location 216. When a cassette label is programmed, locations 220 through 227 cannot be used for any purpose.

WORD 81
INQUIRY TOTAL MNEMONIC
PRINT ADDRESS
(LOCATION 230, SECTOR 1)
Bits 1 through 5 of location 230 contain the print column address, in binary, for the total mnemonic used in the printout of totals during an inquiry transaction. Bits 6, 7, and 8 must be programmed reset (0). The total mnemonic is left justified to this print column address and is followed by a space and then the total number. See figure B-2.

WORD 81A
CLOSING TOTAL NUMBER
PRINT ADDRESS
(LOCATION 231, SECTOR 1)
Bits 1 through 5 of location 231 contain the print column address, in binary, for the total number used in the printout of totals during a closing transaction. Bits 6 and 7 must be programmed reset (0). Bit 8 may be programmed set (1) for right justify or reset (0) for left justify. The total number is followed by a space and then the total mnemonic. See figure B-1.

SECTOR "2" WORD DESCRIPTIONS

WORD 85
DEPARTMENT TABLE, TRANSACTION
TYPE MNEMONICS, DEPARTMENT
MNEMONICS, EXPANDED
DEPARTMENT MNEMONICS
(LOCATION 000-373, SECTOR 2)
This word contains the department table which validates entered department numbers, distributes amounts to the proper department totals, and identifies the department mnemonics used with associated department numbers.

If sufficient core space remains after programming of the department table, transaction

mnemonics may be programmed in this word. These mnemonics are used to replace or expand the basic transaction mnemonics contained in Sector "1" (word 79).

Department mnemonics can also be programmed in this word as space permits. These mnemonics are printed with each department entry during a transaction.

If transaction mnemonics are not used, expanded department mnemonics may be programmed both in this word and in Sector "1" (word 80).

Department Table

Each entry in the department table requires a minimum of three core locations. See Figure D-5. The four least significant digits of the department number are programmed, in BCD, into the first two characters of the table entry. A "don't care" code, hexadecimal F (1111), can be programmed for any of the department number digits. This makes possible the creation of group totals. For example, departments 0500 through 0599 can be made to comprise one total by making the two most significant digits "don't care."

If all four digits of the department number are made "don't care" in the last entry in the table, a miscellaneous total can be created to accumulate all amounts not accumulated elsewhere.

Department numbers entered during a transaction are compared with the number(s) programmed in the first department table entry. The comparison then continues to subsequent table locations. When the entered department number compares with the number programmed in an entry, no further locations of the table are checked. The automatic department number, programmed in locations 162 and 163 of Sector "0," is also checked against the department table.

Bits 1 through 6 in the third character of a table entry designate the total number, in binary, where the amounts associated with the specified department number(s) are to be accumulated. Total numbers 1 through 47 are legal. If an illegal total number is programmed (48 through 63), the associated department number(s) is considered invalid by the 280. Entry of an invalid department number causes the 280 to indicate an error. Department numbers can also be programmed invalid by not entering them in the table.

If the total number is programmed zero (000000), the department number is considered valid, but the amount is not accumulated in any total.

If a department number or group within a valid group is to be programmed invalid, the invalid number or group must be entered into a table entry preceding that of the valid group. See Figure D-6. In this illustration, all department numbers in the 2000 range are valid except for those in the 2500 range.

Bit 7 in the third character is used for department selective data collection. If bit 7 is set (1), the item information for the designated department number(s) will not be data collected and the item amount will be accumulated in the selective data collection hash total itemizer. If bit 7 is reset (0), the item information will be data collected.

	8	7	6	5	4	3	2	1
Char. 1	DEPARTMENT NUMBER Thousands Digit (BCD)				DEPARTMENT NUMBER Hundreds Digit (BCD)			
Char. 2	DEPARTMENT NUMBER Tens Digit (BCD)				DEPARTMENT NUMBER Units Digit (BCD)			
Char. 3	Mnemonic? (1) - Yes (0) - No	Data Collect? (1) - No (0) - Yes	DEPARTMENT TOTAL NUMBER (Binary)					
Char. 4	DEPARTMENT MNEMONIC ADDRESS IN SECTOR "2" (Octal)							

Figure D-5 Basic department table entry

	Char.									
1st Entry	Char. 1	0	0	1	0	0	1	0	1	Dept. No. 25FF (2500-2599)
	Char. 2	1	1	1	1	1	1	1	1	
	Char. 3	0	0	1	1	1	1	1	1	Invalid Total No. 63
2nd Entry	Char. 1	0	0	1	0	1	1	1	1	Dept. No. 2FFF (2000-2999)
	Char. 2	1	1	1	1	1	1	1	1	
	Char. 3	1	0	1	0	0	0	1	1	Total No. 35
	Char. 4	0	1	1	1	1	1	0	0	Mnemonic Address 174

Figure D-6 Sample programming of two department table entries

Bit 8 in the third character indicates if a department mnemonic is to be printed with the associated department entry. If bit 8 is set (1), a department mnemonic is used. If bit 8 is reset (0), a department mnemonic is not used.

If bit 8 in the third character is set (1), a fourth character in the table entry is required. The address in Sector "2" of the associated department mnemonic is programmed, in octal, in the fourth character. If bit 8 in the third character is reset (0), a fourth character is not required.

Figure D-7 illustrates a department table entry if expanded department mnemonics are used. Expanded department mnemonics can only be used if transaction type mnemonics are not used. If bit 8 in the third character is set (1), the table

	8	7	6	5	4	3	2	1
Char. 1	DEPARTMENT NUMBER Thousands Digit (BCD)				DEPARTMENT NUMBER Hundreds Digit (BCD)			
Char. 2	DEPARTMENT NUMBER Tens Digit (BCD)				DEPARTMENT NUMBER Units Digit (BCD)			
Char. 3	Mnemonic? (1) - Yes (0) - No	Data Collect? (1) - No (0) - Yes	DEPARTMENT TOTAL NUMBER (Binary)					
Char. 4	Sector (1) - "1" (0) - "2"	5th Char.? (1) - Yes (0) - No	MNEMONIC'S PLACE IN ORDER OF ENTRY (Sequence Number in Binary)					
Char. 5	Sector (1) - "1" (0) - "2"	Slash? (1) - Yes (0) - No	MNEMONIC'S PLACE IN ORDER OF ENTRY (Sequence Number in Binary)					

Figure D-7 Department table for expanded department mnemonics

contains a minimum of four and a maximum of five characters. Bit 8 of the fourth and fifth characters identifies the core sector in which the associated mnemonic is located. If bit 8 is set (1), the mnemonic is in Sector "1." If bit 8 is reset (0), the mnemonic is in Sector "2." Bits 1 through 6 of the fourth and fifth characters contain the sequence number (order of entry) in binary, of the expanded department mnemonic in the designated sector.

The sequence numbers start with 1 at location 000 of each sector. If bit 7 of the fourth character is set (1), an additional mnemonic is present requiring a fifth character in the table entry. If bit 7 is reset (0), the entry contains only four characters. If bit 7 of the fifth character is set (1), a slash (/) will precede the additional mnemonic (as in shoes/L). If bit 7 is reset (0), the additional mnemonic will be printed immediately following the mnemonic designated by the fourth character.

When using expanded department mnemonics, core space can be conserved by using common mnemonics for different departments. For example, the mnemonic HARDWARE can be created by combining the two separate mnemonics HARD and WARE. The mnemonic SILVERWARE can be created by combining SILVER with the same WARE used in HARDWARE.

The department table can be located anywhere in Section "2" from 000 through 373 with the exception of location 241 which is not used and must be programmed all 0's. The table must end in location 373 unless the last entry is a miscellaneous total (department number FFFF). If the last entry is a miscellaneous total, it is still desirable to have the table end in location 373. This conserves core space in Sector "2" for mnemonics.

Transaction Type Mnemonics

Transaction type mnemonics may be programmed in this word providing that at least 40 consecutive locations in Sector "2," starting with 000, are available. Forty locations provide a one character mnemonic for each of the 40 qualification codes. The mnemonics are associated with their respective qualification codes by order of entry starting at location 000 for qualification code 0. If core space is available, more than one location can be used per mnemonic. Transaction type mnemonics cannot be programmed beyond location 240. The mnemonics are programmed the same as those in Section "1"; i.e., ASCII code for the mnemonic and bit 8 set (1) for the last location of a mnemonic. At least one core location must be used for

each of the mnemonics for the 40 qualification codes. If a mnemonic is not desired for a particular qualification code, an ASCII "space" with bit 8 set (octal 240) must be programmed in the proper location in the sequence.

The transaction type mnemonics in Sector "2" may be used to replace or expand the basic transaction type mnemonics in Sector "1." For reference, table D-1 identifies the basic transaction type mnemonics in Sector "1" and identifies each mnemonic by sequence number.

Qual. Code	Trans. Type	Mnemonic Sequence Number	Sample Mnemonic (Programmable)
0	Charge	—	None
1	Cash	15	Csh.
2	Cash	15	Csh.
3	Charge	14	Chg.
4	Charge	14	Chg.
5	Charge	14	Chg.
6	Bank Chg.	14	Chg.
7	Bank Chg.	14	Chg.
10	COD	16	COD
11	Layaway	17	LWY
12	No Sale	—	None
13	Void	—	None
14	Rec. On Acct.	19	ROA
15	Charge	—	None
16	Cash	—	None
17	Bank Chg.	—	None
20	Cash Rtn.	15	Csh.
21	Chg. Rtn.	14	Chg.
22	Chg. Rtn.	14	Chg.
23	Chg. Rtn.	14	Chg.
24	Chg. Rtn.	14	Chg.
25	Chg. Rtn.	14	Chg.
26	Bank Chg. Rtn.	14	Chg.
27	Bank Chg. Rtn.	14	Chg.
30	Cash Exch.	15	Csh.
31	Chg. Exch.	14	Chg.
32	Chg. Exch.	14	Chg.
33	Chg. Exch.	14	Chg.
34	Chg. Exch.	14	Chg.
35	Chg. Exch.	14	Chg.
36	Bank Chg. Exch.	14	Chg.
37	Bank Chg. Exch.	14	Chg.
40	Charge	—	None
41	Charge	—	None
42	Cashier Open	—	None
43	Clerk Open	—	None
44	Closing	—	None
45	Re-Entry	—	None
46	Totals Inquiry	—	None
47	Programming	—	None

Table D-1 Sector "1" basic transaction mnemonics sequence numbers

To replace the basic transaction type mnemonics with those in Sector "2," it is necessary to exclude the "transaction type" field from the header and footer print control tables (words 24 and 25). The 280 then prints the qualification code number followed by the Sector "2" mnemonic. The print column address for the Sector "2" transaction type mnemonics is contained in location 374, Sector "2" (word 86).

To expand the basic transaction type

mnemonics, the print column address of the mnemonics in Sector "2" must be coordinated with that of the transaction type field in the header or footer print control table. It is important to understand that the basic transaction type mnemonics in Sector "1" are loaded into the print buffer after the transaction type mnemonics in Sector "2." Therefore, a basic mnemonic for a particular transaction will cancel a Sector "2" mnemonic where the print columns are the same.

Department Mnemonics

Department mnemonics can be programmed into any unused locations in Sector "2" except location 241. They may be programmed before or after location 241 but cannot be split by this location. These are the mnemonics referenced in the basic department table (Figure D-5). The mnemonics are programmed in ASCII code with bit 8 of the last location set (1). They are printed with each department entry during a transaction. The print column address for the department mnemonics is programmed in location 210, Sector "0" (Word 50). Under control of word 50A, the department mnemonic and price may be printed on the same line as the item information or on the following line. With the exception of the price field, the department mnemonic is the last item information field loaded into the printer buffer. Therefore, the department mnemonic will cancel any other item information characters programmed for the same print columns.

Expanded Department Mnemonics

If transaction mnemonics are not used, expanded department mnemonics may be programmed in this word as well as word 80 of Sector "1." The expanded department mnemonics must start in location 000 of Sector "2" and continue in consecutive locations. Core space through location 240 or to the start of the department table may be used. These are the mnemonics referred to in the expanded department mnemonics table (Figure D-7). The mnemonics are programmed in ASCII code and bit 8 of the last location of a mnemonic is set (1). They are printed with each department entry during a transaction. Programming for the printing of expanded department mnemonics is the same as that described for department menmonics. When expanded department mnemonics are used, location 374, Sector "2," must be programmed all 1's (octal 377).

WORD 86
TRANSACTION MNEMONICS PRINT ADDRE
(LOCATION 374, SECTOR 2)
Bits 1 through 5 of this word contain, in bina the print column address of the Sector " transaction type mnemonics. The qualificati code number associated with the mnemonic printed left justified to this address. Bits 6 and must be programmed reset (0). Bit 8 determines the mnemonic is printed in the header or footer. bit 8 is set (1), the mnemonic is printed in tl header. If bit 8 is reset (0), the mnemonic printed in the footer. Programming of this wor must be coordinated with the programming of tl header and footer print control tables (words 2 and 25). See MS-5061.

If transaction type mnemonics are not pr grammed in Sector "2," this word must b programmed in one of two ways:

1. Expanded department mnemonics used — all bits must be set (1).
2. Expanded department mnemonics not used – bits 1 through 5 must be set (1), bits 6 and 7 must be reset (0), and bit 8 is "don't care."

WORD 87
DEPARTMENT TABLE STARTING ADDRESS
(LOCATION 375, SECTOR 2)
This word contains, in octal, the starting location of the first department table entry.

WORD 88
CORE CHECK DIGIT
(LOCATION 376, SECTOR 2)
This word contains a check digit which is generated by the terminal using all data stored in locations 000 through 375 of Sector "2."

WORD 89
SECTOR CONTROL
(LOCATION 377, SECTOR 2)
This word is used by the firmware to store the sector number in the programming mode. This word is required to maintain programming and diagnostic limits.

SECTOR "3" WORD DESCRIPTIONS

WORD 90
DEPARTMENT TOTALS
(LOCATIONS 000-275, SECTOR 3)
This word is used to store the 47 department totals. Each total occupies four core locations. The totals are in numeric order starting with total

locations 000 through 003. All locations in this word are used with the exception of 240 and 241.

WORD 91
NOT USED
(LOCATIONS 276-304, SECTOR 3)
This word is not presently in use.

WORD 92
TOTAL ITEMIZERS
(LOCATIONS 305-314, SECTOR 3)
This word contains the checks tendered itemizer (for the checks tendered control total) and the exchange itemizer (for the return sales and exchanged merchandise transaction total). Each itemizer has an eight digit capacity.

WORD 93
CONTROL AND TRANSACTION TOTALS
(LOCATIONS 315-376, SECTOR 3)
This word contains 10 control and transaction totals. Each total has a 10 digit capacity.

WORD 94
SECTOR CONTROL
(LOCATION 377, SECTOR 3)
This word is used by the firmware to store the sector number in the programming mode. This word is required to maintain programming and diagnostics limits.

CORE MAPS

Because of the significant differences in the core maps for the Phase II and the IDT terminals, a complete core map for the IDT terminal is presented in tables D-2, D-3, D-4, and D-5.

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA									OCTAL		
			8	7	6	5	4	3	2	1			
1	Option Control #4	0 0 0	0	0	0	0	1	1	0	1	0	1	5
2	Communications Time Out	0 0 1	0	0	1	1	1	1	0	0	0	7	4
3	CDV Method, Qualification Data Enforce, Tax Exception Code	0 0 2	0	0	0	1	1	0	1	0	0	3	2
4	ID Number TCW and Minimum Floor Limit TCW	0 0 3	0	1	0	0	0	1	0	1	1	0	5
		0 0 4	0	0	0	1	0	1	0	1	0	2	5
		0 0 5	0	1	1	1	0	1	1	0	1	6	6
5	1st Merchandise TCW _Dept_	0 0 6	0	1	0	0	0	0	0	1	1	0	1
		0 0 7	0	0	0	0	0	0	0	0	0	0	0
		0 1 0	0	0	0	1	0	0	1	1	0	2	3
6	2nd Merchandise TCW _Class_	0 1 1	0	1	0	0	0	0	1	0	1	0	2
		0 1 2	0	0	0	0	0	1	0	0	0	0	4
		0 1 3	0	0	0	1	0	0	1	0	0	2	2
7	3rd Merchandise TCW _Mdse N°_	0 1 4	0	1	0	0	0	0	1	1	1	0	3
		0 1 5	0	0	0	0	0	1	1	1	0	0	7
		0 1 6	0	0	0	1	1	0	0	0	0	3	0
8	Miscellaneous Data TCW	0 1 7	1	0	1	1	0	1	0	1	2	6	5
		0 2 0	1	1	1	1	1	1	1	1	3	7	7
		0 2 1	0	0	0	0	1	1	0	1	0	1	5
9	Quantity/Price TCW	0 2 2	0	0	1	0	0	0	1	1	0	4	3
		0 2 3	1	1	0	0	1	1	0	1	3	1	5
		0 2 4	0	0	1	0	1	0	1	1	0	5	3

Table D-2 Core map, sector "0"

WORD NO.	WORD NAME	LOC. OCTAL			SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1								OCTAL		
10	Nonmerchandise TCW	0 2 5			0 0 1 1 1 0 0 1								0 7 1		
		0 2 6			0 0 1 1 1 0 1 0								0 7 2		
		0 2 7			0 0 1 1 1 0 1 1								0 7 3		
		0 3 0			0 0 1 1 1 1 0 0								0 7 4		
		0 3 1			0 0 1 1 0 1 0 1								0 6 5		
		0 3 2			0 0 0 0 0 0 0 0								0 0 0		
		0 3 3			0 0 1 1 0 0 0 1								0 6 1		
11	Discount ID TCW	0 3 4			0 0 1 1 1 0 0 1								0 7 1		
		0 3 5			0 1 0 0 0 1 0 1								1 0 5		
		0 3 6			0 0 0 0 0 0 1 1								0 0 3		
		0 3 7			0 0 1 1 0 1 1 0								0 6 6		
12	Discount Percent TCW	0 4 0			0 0 1 1 1 0 0 1								0 7 1		
		0 4 1			0 1 1 0 0 0 1 1								1 4 3		
		0 4 2			1 0 0 0 1 1 0 1								2 1 5		
		0 4 3			0 0 0 1 0 1 0 0								0 2 4		
13	Fee Type TCW	0 4 4			0 0 1 1 0 0 1 0								0 6 2		
		0 4 5			0 0 0 0 0 0 1 0								0 0 2		
		0 4 6			0 0 0 0 0 1 1 0								0 0 6		
14	Fee Amount TCW	0 4 7			0 0 1 1 1 0 1 0								0 7 2		
		0 5 0			0 1 1 0 0 1 0 1								1 4 5		
		0 5 1			1 1 1 1 1 1 1 1								3 7 7		
		0 5 2			0 0 1 1 0 1 0 1								0 6 5		
15	Miscellaneous Credit Type TCW	0 5 3			0 0 1 1 0 0 1 1								0 6 3		
		0 5 4			0 0 0 0 0 0 1 0								0 0 2		
		0 5 5			0 0 0 0 0 1 1 0								0 0 6		
16	Miscellaneous Credit Amount TCW	0 5 6			0 0 1 1 1 0 1 1								0 7 3		
		0 5 7			0 1 1 0 0 1 0 1								1 4 5		
		0 6 0			1 0 0 0 1 1 0 1								2 1 5		
		0 6 1			0 0 1 1 0 1 0 1								0 6 5		
17	Deposit Amount TCW	0 6 2			0 0 1 1 1 1 0 0								0 7 4		
		0 6 3			0 1 1 0 0 1 0 1								1 4 5		
		0 6 4			0 0 0 1 1 0 1 1								0 3 3		
		0 6 5			0 0 1 1 0 1 0 1								0 6 5		
18	Amount Tendered TCW	0 6 6			0 0 1 0 0 1 0 0								0 4 4		
		0 6 7			0 0 0 0 0 0 1 1								0 0 3		
		0 7 0			0 0 0 0 1 0 0 0								0 1 0		
19	Account Number TCW	0 7 1			0 1 1 0 0 1 0 0								1 4 4		
		0 7 2			0 0 1 0 0 0 1 1								0 4 3		
		0 7 3			0 0 1 1 1 1 1 0								0 7 6		
20	Manual Tax TCW	0 7 4			0 0 1 0 0 0 0 1								0 4 1		
		0 7 5			0 0 0 0 0 0 0 0								0 0 0		
		0 7 6			1 0 0 0 0 1 0 0								2 0 4		
21	Date TCW	0 7 7			0 0 1 0 0 1 0 1								0 4 5		
		1 0 0			0 1 1 0 1 1 1 0								1 5 6		
		1 0 1			0 0 0 0 1 0 0 0								0 1 0		

Table D-2 Core map, sector "0", cont'd

WORD NO.	WORD NAME	LOC. OCTAL			BINARY BIT 8	7	6	5	4	3	2	1	OCTAL		
22	Transaction Void TCW	1	0	2	0	0	1	0	0	0	1	0	0	4	2
		1	0	3	1	1	0	0	1	1	1	1	3	1	7
		1	0	4	0	0	1	0	1	0	0	1	0	5	1
23	Closing TCW	1	0	5	0	0	1	0	0	0	1	1	0	4	3
		1	0	6	0	0	0	0	1	1	1	0	0	1	6
		1	0	7	0	0	0	0	1	0	0	1	0	1	1
24	Header Print Control Table	1	1	0	0	0	0	1	0	0	0	0	0	2	0
		1	1	1	0	0	1	0	1	0	1	1	0	5	3
		1	1	2	0	0	1	1	0	1	1	0	0	6	6
		1	1	3	1	1	0	0	0	1	1	1	3	0	7
25	Footer Print Control Table	1	1	4	0	1	0	1	0	0	0	0	1	2	0
		1	1	5	1	1	1	0	1	0	1	0	3	5	2
		1	1	6	0	0	0	0	0	0	0	0	0	0	0
26	Amount Print Control	1	1	7	1	0	1	1	1	0	0	0	2	7	0
27	Trailer Print Slew Lines	1	2	0	0	1	0	0	0	1	0	0	1	0	4
28	Qualification Choice Table	1	2	1	1	0	0	0	0	0	0	0	2	0	0
		1	2	2	0	0	0	0	0	1	1	1	0	0	7
		1	2	3	0	0	0	0	1	1	0	0	0	1	4
		1	2	4	0	0	0	0	1	1	0	0	0	1	4
		1	2	5	1	1	0	0	0	0	1	0	3	0	2
29	Slip Enforce Table	1	2	6	0	0	1	1	1	1	1	1	0	7	7
		1	2	7	1	1	0	1	1	0	0	0	3	3	0
		1	3	0	1	1	1	1	0	0	1	1	3	6	3
		1	3	1	1	1	1	1	0	0	1	1	3	6	3
30	Media Validation Table	1	3	2	0	0	0	0	0	0	0	0	0	0	0
		1	3	3	0	0	0	0	0	0	0	0	0	0	0
		1	3	4	0	0	0	0	0	0	0	0	0	0	0
		1	3	5	0	0	0	0	0	0	0	0	0	0	0
31	Media Count Table	1	3	6	0	0	1	1	1	1	1	1	0	7	7
		1	3	7	1	1	0	1	1	0	0	0	3	3	0
		1	4	0	1	1	1	1	0	0	1	1	3	6	3
		1	4	1	1	1	1	1	0	0	1	1	3	6	3
32	Header/Body/Account Number Spacing	1	4	2	0	1	0	0	0	0	0	0	1	0	0
33	CDV Modulus	1	4	3	1	0	1	0	1	0	1	0	2	5	2
34	CDV Weights	1	4	4	0	0	0	1	0	0	0	1	0	2	1
		1	4	5	0	0	0	1	0	0	0	1	0	2	1
		1	4	6	0	0	1	0	0	0	1	0	0	4	2
		1	4	7	0	0	0	1	0	0	0	1	0	2	1
		1	5	0	0	0	1	0	0	0	1	0	0	4	2
		1	5	1	0	0	0	1	0	0	0	1	0	2	1
		1	5	2	0	0	1	0	0	0	1	0	0	4	2
		1	5	3	0	0	0	1	0	0	0	1	0	2	1
		1	5	4	0	0	1	0	0	0	1	0	0	4	2
		1	5	5	0	0	0	1	0	0	0	1	0	2	1
		1	5	6	0	0	1	0	0	0	1	0	0	4	2
		1	5	7	0	0	0	1	0	0	0	1	0	2	1
		1	6	0	0	0	1	0	0	0	1	0	0	4	2
		1	6	1	0	0	0	1	0	0	0	1	0	2	1

Table D-2 Core map, sector "0", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
35	Automatic Department Number	1 6 2	0 0 0 0 1 0 0 1	0 1 1
		1 6 3	1 0 0 1 1 0 0 1	2 3 1
36	Automatic Qualification	1 6 4	0 0 0 0 0 0 0 1	0 0 1
37	Rounding Constants	1 6 5	0 0 0 0 0 0 0 0	0 0 0
		1 6 6	0 1 0 1 0 0 0 0	1 2 0
38	Automatic Discount Percent	1 6 7	0 0 0 1 0 0 0 0	0 2 0
		1 7 0	0 0 0 0 0 0 0 0	0 0 0
39	Automatic Tax Percent	1 7 1	0 0 0 1 0 0 1 0	0 2 2
		1 7 2	0 0 0 0 0 0 0 0	0 0 0
40	RST, Offline Code Control, and Audio Offline Indication	1 7 3	0 0 0 0 0 0 0 0	0 0 0
41	Data Collector Buffer Cutoff	1 7 4	1 1 0 0 0 1 1 1	3 0 7
42	Sequence Format Character	1 7 5	0 0 0 0 0 0 0 0	0 0 0
43	Floor Limit	1 7 6	0 0 0 0 0 0 0 0	0 0 1
		1 7 7	0 1 0 0 1 0 0 1	1 1 1
44	Option Control 1	2 0 0	0 1 0 1 0 1 0 0	1 2 4
45	Option Control 2	2 0 1	0 0 0 0 0 0 0 0	0 0 0
46	Option Control 3	2 0 2	0 0 0 0 0 0 0 0	0 0 0
47	Store Number	2 0 3	0 0 0 0 0 0 1 1	0 0 3
		2 0 4	0 0 1 1 0 0 1 1	0 6 3
48	Terminal Number	2 0 5	0 0 0 0 0 0 1 0	0 0 2
		2 0 6	1 0 0 0 0 0 0 0	2 0 0
49	Maximum Slip Lines	2 0 7	0 0 0 0 1 0 1 0	0 1 2
50	Option Control 5	2 1 0	0 0 0 0 0 0 0 0	0 0 0
50A	Option Control 6	2 1 1	0 0 0 0 0 0 0 0	0 0 0
51	Core Check Digit	2 1 2	1 1 0 0 0 1 0 0	3 0 4
52	Offline Reason Code (761)	2 1 3	0 0 0 0 0 0 0 0	0 0 0
53	Not Used	2 1 4	0 0 0 0 0 0 0 0	0 0 0
54	Slip Line Count	2 1 5		

Table D-2 Core map, sector "0", Cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
55	Selective Data Collection Hash Total Itemizer (216-221), Account Number Storage (216-233), Work Register #3 (223-227), and CCTR Quantity (232-233)	2 1 6 2 1 7 2 2 0 2 2 1 2 2 2 2 2 3 2 2 4 2 2 5 2 2 6 2 2 7 2 3 0 2 3 1 2 3 2 2 3 3		
56	Store IND 1	2 3 4		
57	Re-Link	2 3 5		
58	Qualification Code	2 3 6		107.
59	Print Control Character	2 3 7		
60	Core Flag 2	2 4 0		
61	Core Flag 3	2 4 1		
62	Work Register #1	2 4 2 2 4 3 2 4 4 2 4 5		
63	Work Register #2	2 4 6 2 4 7 2 5 0 2 5 1		
64	Deposit Total	2 5 2 2 5 3 2 5 4 2 5 5		
65	Nontaxable Itemizer	2 5 6 2 5 7 2 6 0 2 6 1		
66	Taxable Itemizer	2 6 2 2 6 3 2 6 4 2 6 5		
67	Discount Itemizer	2 6 6 2 6 7 2 7 0 2 7 1		
	Fee Itemizer	2 7 2 2 7 3 2 7 4 2 7 5		

Table D-2 Core map, sector "0", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
67 cont'd	Miscellaneous Credit Itemizer	2 7 6 2 7 7 3 0 0 3 0 1		
	Item Corrected Amount Itemizer	3 0 2 3 0 3 3 0 4 3 0 5		
	Tax Itemizer	3 0 6 3 0 7 3 1 0 3 1 1		
68	Operator ID Number	3 1 2 3 1 3 3 1 4		
69	Current Date	3 1 5 3 1 6 3 1 7 3 2 0		045 360 177 207
70	Core Flag #1	3 2 1		204
71	Offline Reason Code (723)	3 2 2		067
72	Transaction Count	3 2 3 3 2 4		243 122
73	Media Count	3 2 5 3 2 6		000 023
74	Discount Total	3 2 7 3 3 0 3 3 1 3 3 2 3 3 3		
	Fee Total	3 3 4 3 3 5 3 3 6 3 3 7 3 4 0		
	Miscellaneous Credit Total	3 4 1 3 4 2 3 4 3 3 4 4 3 4 5		
	Item Corrected Amount Total	3 4 6 3 4 7 3 5 0 3 5 1 3 5 2		
	Tax Total	3 5 3 3 5 4 3 5 5 3 5 6 3 5 7		

Figure D-2 Core map, sector "0", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
75	Cash Total	3 6 0 3 6 1 3 6 2 3 6 3 3 6 4		
76	Returns Total	3 6 5 3 6 6 3 6 7 3 7 0 3 7 1		
77	Sales Total	3 7 2 3 7 3 3 7 4 3 7 5 3 7 6		
78	Total Control	3 7 7		

Table D-2   Core map, sector "0", cont'd

WORD NO.	WORD NAME *		LOC. OCTAL	BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
79	Mnemonics	M	0 0 0	0 1 0 0 1 1 0 1	1 1 5
		D	0 0 1	0 1 0 0 0 1 0 0	1 0 4
	0 1	S	0 0 2	1 1 0 1 0 0 1 1	3 2 3
		R	0 0 3	0 1 0 1 0 0 1 0	1 2 2
	0 2	T	0 0 4	0 1 0 1 0 1 0 0	1 2 4
		N	0 0 5	1 1 0 0 1 1 1 0	3 1 6
		E	0 0 6	0 1 0 0 0 1 0 1	1 0 5
	0 3	R	0 0 7	0 1 0 1 0 0 1 0	1 2 2
		R	0 1 0	1 1 0 1 0 0 1 0	3 2 2
		S	0 1 1	0 1 0 1 0 0 1 1	1 2 3
	0 4	T	0 1 2	0 1 0 1 0 1 0 0	1 2 4
		L	0 1 3	1 1 0 0 1 1 0 0	3 1 4
		D	0 1 4	0 1 0 0 0 1 0 0	1 0 4
	0 5	I	0 1 5	0 1 0 0 1 0 0 1	1 1 1
		S	0 1 6	1 1 0 1 0 0 1 1	3 2 3
		F	0 1 7	0 1 0 0 0 1 1 0	1 0 6
	0 6	E	0 2 0	0 1 0 0 0 1 0 1	1 0 5
		E	0 2 1	1 1 0 0 0 1 0 1	3 0 5
		M	0 2 2	0 1 0 0 1 1 0 1	1 1 5
	0 7	S	0 2 3	0 1 0 1 0 0 1 1	1 2 3
		C	0 2 4	1 1 0 0 0 0 1 1	3 0 3
		D	0 2 5	0 1 0 0 0 1 0 0	1 0 4
	0 8	E	0 2 6	0 1 0 0 0 1 0 1	1 0 5
		P	0 2 7	1 1 0 1 0 0 0 0	3 2 0
		T	0 3 0	0 1 0 1 0 1 0 0	1 2 4
	0 9	A	0 3 1	0 1 0 0 0 0 0 1	1 0 1
		X	0 3 2	1 1 0 1 1 0 0 0	3 3 0
		T	0 3 3	0 1 0 1 0 1 0 0	1 2 4
	1 0	T	0 3 4	0 1 0 1 0 1 0 0	1 2 4
		L	0 3 5	1 1 0 0 1 1 0 0	3 1 4
		C	0 3 6	0 1 0 0 0 0 1 1	1 0 3
	1 1	R	0 3 7	0 1 0 1 0 0 1 0	1 2 2
		T	0 4 0	1 1 0 1 0 1 0 0	3 2 4
		A	0 4 1	0 1 0 0 0 0 0 1	1 0 1
	1 2	T	0 4 2	0 1 0 1 0 1 0 0	1 2 4
		D	0 4 3	1 1 0 0 0 1 0 0	3 0 4
		C	0 4 4	0 1 0 0 0 0 1 1	1 0 3
	1 3	D	0 4 5	0 1 0 0 0 1 0 0	1 0 4
		U	0 4 6	1 1 0 1 0 1 0 1	3 2 5
		C	0 4 7	0 1 0 0 0 0 1 1	1 0 3
	1 4	H	0 5 0	0 1 0 0 1 0 0 0	1 1 0
		G	0 5 1	1 1 0 0 0 1 1 1	3 0 7
		C	0 5 2	0 1 0 0 0 0 1 1	1 0 3
	1 5	S	0 5 3	0 1 0 1 0 0 1 1	1 2 3
		H	0 5 4	1 1 0 0 1 0 0 0	3 1 0

* The double digit numbers are the mnemonics sequence numbers.

Table D-3 Core map, sector "1"

WORD NO.	WORD NAME *		LOC. OCTAL			SAMPLE DATA BINARY BIT								OCTAL		
						8	7	6	5	4	3	2	1			
79 Cont'd	Mnemonics	C	0	5	5	0	1	0	0	0	0	1	1	1	0	3
	1 6	O	0	5	6	0	1	0	0	1	1	1	1	1	1	7
		D	0	5	7	1	1	0	0	0	1	0	0	3	0	4
		L	0	6	0	0	1	0	0	1	1	0	0	1	1	4
	1 7	W	0	6	1	0	1	0	1	0	1	1	1	1	2	7
		Y	0	6	2	1	1	0	1	1	0	0	1	3	3	1
		V	0	6	3	0	1	0	1	0	1	1	0	1	2	6
	1 8	O	0	6	4	0	1	0	0	1	1	1	1	1	1	7
		D	0	6	5	1	1	0	0	0	1	0	0	3	0	4
		R	0	6	6	0	1	0	1	0	0	1	0	1	2	2
	1 9	O	0	6	7	0	1	0	0	1	1	1	1	1	1	7
		A	0	7	0	1	1	0	0	0	0	0	1	3	0	1
		C	0	7	1	0	1	0	0	0	0	1	1	1	0	3
	2 0	S	0	7	2	0	1	0	1	0	0	1	1	1	2	3
		H	0	7	3	1	1	0	0	1	0	0	0	3	1	0
		R	0	7	4	0	1	0	1	0	0	1	0	1	2	2
	2 1	S	0	7	5	0	1	0	1	0	0	1	1	1	2	3
		T	0	7	6	1	1	0	1	0	1	0	0	3	2	4
		C	0	7	7	0	1	0	0	0	0	1	1	1	0	3
	2 2	S	1	0	0	0	1	0	1	0	0	1	1	1	2	3
		–	1	0	1	1	0	1	0	1	1	0	1	2	5	5
		R	1	0	2	0	1	0	1	0	0	1	0	1	2	2
	2 3	T	1	0	3	0	1	0	1	0	1	0	0	1	2	4
		N	1	0	4	1	1	0	0	1	1	1	0	3	1	6
		S	1	0	5	0	1	0	1	0	0	1	1	1	2	3
	2 4	L	1	0	6	0	1	0	0	1	1	0	0	1	1	4
		E	1	0	7	1	1	0	0	0	1	0	1	3	0	5
		C	1	1	0	0	1	0	0	0	0	1	1	1	0	3
	2 5	N	1	1	1	0	1	0	0	1	1	1	0	1	1	6
		T	1	1	2	1	1	0	1	0	1	0	0	3	2	4
		V	1	1	3	0	1	0	1	0	1	1	0	1	2	6
		O	1	1	4	0	1	0	0	1	1	1	1	1	1	7
	2 6	I	1	1	5	0	1	0	0	1	0	0	1	1	1	1
		D	1	1	6	0	1	0	0	0	1	0	0	1	0	4
			1	1	7	1	0	1	0	0	0	0	0	2	4	0
		D	1	2	0	0	1	0	0	0	1	0	0	1	0	4
		I	1	2	1	0	1	0	0	1	0	0	1	1	1	1
	2 7	A	1	2	2	0	1	0	0	0	0	0	1	1	0	1
		G	1	2	3	0	1	0	0	0	1	1	1	1	0	7
			1	2	4	1	0	1	0	0	0	0	0	2	4	0
		C	1	2	5	0	1	0	0	0	0	1	1	1	0	3
	2 8	T	1	2	6	0	1	0	1	0	1	0	0	1	2	4
		D	1	2	7	1	1	0	0	0	1	0	0	3	0	4
		/	1	3	0	0	0	1	0	1	1	1	1	0	5	7
	2 9	/	1	3	1	0	0	1	0	1	1	1	1	0	5	7
		/	1	3	2	1	0	1	0	1	1	1	1	2	5	7

* The double digit numbers are the mnemonics sequence numbers.

Table D-3 Core map, sector "1", cont'd

WORD NO.	WORD NAME			LOC. OCTAL	BINARY BIT 8	7	6	5	4	3	2	1	OCTAL		
79 Cont'd		3 0	N	1 3 3	0	1	0	0	1	1	1	0	1	1	6
			T	1 3 4	0	1	0	1	0	1	0	0	1	2	4
				1 3 5	1	0	1	0	0	0	0	0	2	4	0
		3 1	D	1 3 6	0	1	0	0	0	1	0	0	1	0	4
			P	1 3 7	1	1	0	1	0	0	0	0	3	2	0
		3 2	R	1 4 0	0	1	0	1	0	0	1	0	1	2	2
			T	1 4 1	1	1	0	1	0	1	0	0	3	2	4
		3 3	N	1 4 2	0	1	0	0	1	1	1	0	1	1	6
			/	1 4 3	0	0	1	0	1	1	1	1	0	5	7
			S	1 4 4	0	1	0	1	0	0	1	1	1	2	3
			L	1 4 5	1	1	0	0	1	1	0	0	3	1	4
		3 4	N	1 4 6	0	1	0	0	1	1	1	0	1	1	6
			/	1 4 7	0	0	1	0	1	1	1	1	0	5	7
			M	1 5 0	0	1	0	0	1	1	0	1	1	1	5
			D	1 5 1	1	1	0	0	0	1	0	0	3	0	4
80	Mnemonics Expansion, Expanded Department Mnemonics, Cassette Label			1 5 2											
				1 5 3											
				1 5 4											
				1 5 5											
				1 5 6											
				1 5 7											
				1 6 0											
				1 6 1											
				1 6 2											
				1 6 3											
				1 6 4											
				1 6 5											
				1 6 6											
				1 6 7											
				1 7 0											
				1 7 1											
				1 7 2											
				1 7 3											
				1 7 4											
				1 7 5											
				1 7 6											
				1 7 7											
				2 0 0											
				2 0 1											
				2 0 2											
				2 0 3											
				2 0 4											
				2 0 5											
				2 0 6											
				2 0 7											
				2 1 0											
				2 1 1											
				2 1 2											
				2 1 3											
				2 1 4											
				2 1 5											
				2 1 6											
	Cassette Label Starting Address			2 1 7											

Table D-3 Core map, sector "1", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
80 Cont'd		2 2 0		
		2 2 1		
		2 2 2		
		2 2 3		
		2 2 4		
		2 2 5		
		2 2 6		
		2 2 7		
81	Inquiry Total Mnemonic Print Address	2 3 0		
81A	Closing Total Number Print Address	2 3 1		
82	Core Check	2 3 2	0 0 1 0 0 1 0 0	0 4 4
83	761 DC Buffer	2 3 3		
		2 3 4		
		2 3 5		
		2 3 6		
		2 3 7		
		2 4 0		
		2 4 1		
		2 4 2		
		2 4 3		
		2 4 4		
		2 4 5		
		2 4 6		
		2 4 7		
		2 5 0		
	761 or 723 DC Buffer	2 5 1		
		2 5 2		
		2 5 3		
		2 5 4		
		2 5 5		
		2 5 6		
		2 5 7		
		2 6 0		
		2 6 1		
		2 6 2		
		2 6 3		
		2 6 4		
		2 6 5		
		2 6 6		
		2 6 7		
		2 7 0		
		2 7 1		
		2 7 2		
		2 7 3		
		2 7 4		
		2 7 5		
		2 7 6		
		2 7 7		
		3 0 0		
		3 0 1		
		3 0 2		
		3 0 3		
		3 0 4		
		3 0 5		
		3 0 6		

Table D-3   Core map, sector "1", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
83 Cont'd	761 or 723 DC Buffer Cont'd	3 0 7		
		3 1 0		
		3 1 1		
		3 1 2		
		3 1 3		
		3 1 4		
		3 1 5		
		3 1 6		
		3 1 7		
		3 2 0		
		3 2 1		
		3 2 2		
		3 2 3		
		3 2 4		
		3 2 5		
		3 2 6		
		3 2 7		
		3 3 0		
		3 3 1		
		3 3 2		
		3 3 3		
		3 3 4		
		3 3 5		
		3 3 6		
		3 3 7		
		3 4 0		
		3 4 1		
		3 4 2		
		3 4 3		
		3 4 4		
	761 DC Buffer	3 4 5		
		3 4 6		
		3 4 7		
		3 5 0		
		3 5 1		
		3 5 2		
		3 5 3		
		3 5 4		
		3 5 5		
		3 5 6		
		3 5 7		
		3 6 0		
		3 6 1		
		3 6 2		
		3 6 3		
		3 6 4		
		3 6 5		
		3 6 6		
		3 6 7		
		3 7 0		
		3 7 1		
		3 7 2		
		3 7 3		
		3 7 4		
		3 7 5		
	761 DC Buffer or 723 Odd Character	3 7 6		
84	Sector Control	3 7 7		

Table D-3   Core map, sector "1", cont'd

WORD NO.	WORD NAME	LOC. OCTAL	SAMPLE DATA BINARY BIT 8 7 6 5 4 3 2 1	OCTAL
85	Department Table, Transaction Type Mnemonics, Department Mnemonics, Expanded Department Mnemonics	0 0 0 0 0 1 . . . . 2 3 7 2 4 0		
	Not Used	2 4 1	0 0 0 0 0 0 0 0	
		2 4 2 2 4 3 . . . . 3 7 2 3 7 3		
86	Transaction Menmonics Print Address	3 7 4		
87	Dept. Table Starting Address	3 7 5		
88	Core Check Digit	3 7 6		
89	Sector Control	3 7 7		

Table D-4   Core map, sector "2"

WORD NO.	WORD NAME		LOC. OCTAL	SAMPLE DATA								OCTAL
				BINARY BIT								
				8	7	6	5	4	3	2	1	
90	Department Totals	Dept. Total No. 1	0 0 0 0 0 1 0 0 2 0 0 3									
		Dept. Total No. 2	0 0 4 0 0 5 0 0 6 0 0 7									
			. . . .									
		Dept. Total No. 40	2 . 3 4 2 3 5 2 3 6 2 3 7									
		Not Used	2 4 0 2 4 1									
		Dept. Total No. 41	2 4 2 2 4 3 2 4 4 2 4 5									
			. . . .									
		Dept. Total No. 47	2 7 2 2 7 3 2 7 4 2 7 5									
91	Not Used		2 7 6 2 7 7 3 0 0 3 0 1 3 0 2 3 0 3 3 0 4									
92	Totals Itemizers	Checks Tendered Itemizer	3 0 5 3 0 6 3 0 7 3 1 0									
		Exchange Itemizer	3 1 1 3 1 2 3 1 3 3 1 4									
93	Control And Transaction Totals	Checks Tendered Total	3 1 5 3 1 6 3 1 7 3 2 0 3 2 1									

Table D-5 Core map, sector "3"

WORD NO.	WORD NAME		LOC. OCTAL	SAMPLE DATA									OCTAL
				BINARY BIT									
				8	7	6	5	4	3	2	1		
93 cont'd	Control And Transaction Totals cont'd	Deposit Total	3 2 2 3 2 3 3 2 4 3 2 5 3 2 6										
		Cash Total	3 2 7 3 3 0 3 3 1 3 3 2 3 3 3										
		Charge Total	3 3 4 3 3 5 3 3 6 3 3 7 3 4 0										
		Rec'd On Account Total	3 4 1 3 4 2 3 4 3 3 4 4 3 4 5										
		COD and Layaway Total	3 4 6 3 4 7 3 5 0 3 5 1 3 5 2										
		Bank Card Charge Total	3 5 3 3 5 4 3 5 5 3 5 6 3 5 7										
		Misc. Cash Total	3 6 0 3 6 1 3 6 2 3 6 3 3 6 4										
		Misc. Charge Total	3 6 5 3 6 6 3 6 7 3 7 0 3 7 1										
		Returns And Exchange Total	3 7 2 3 7 3 3 7 4 3 7 5 3 7 6										
94	Sector Control		3 7 7										

Table D-5   Core map, sector "3", cont'd

PROGRAMMING METHODS

ACCESSIBLE CORE LOCATIONS
In the programming mode, the following core locations are available for read and write operations.

    Sector "0" — 000 through 212
    Sector "1" — 000 through 232
    Sector "2" — 000 through 376

If the terminal is in the diagnostic mode, the following core locations are available for read and write operations.

    Sector "0" — 000 through 326
    Sector "1" — 000 through 376
    Sector "2" — 000 through 376
    Sector "3" — 000 through 314

MNEMONIC CODING
For convenience when programming mnemonic characters, table D-6 lists the octal code for all available print symbols.

Print Symbol	Octal Code	Print Symbol	Octal Code
Space	040	F	106
#	043	G	107
1/2	044	H	110
%	045	I	111
.	065	J	112
.	056	K	113
/	057	L	114
0	060	M	115
1	061	N	116
2	062	O	117
3	063	P	120
4	064	Q	121
5	065	R	122
6	066	S	123
7	067	T	124
8	070	U	125
9	071	V	126
A	101	W	127
B	102	X	130
C	103	Y	131
D	104	Z	132
E	105		

Table D-6   Mnemonic octal coding

HEADER AND FOOTER PROGRAMMING

The transaction type field must be programmed to print in the header (word 24) or footer (word 25) to identify the transaction. If the transaction is not identified, it is not possible to analyze and balance the journal. This applies to all 280 terminals.

TERMINAL ADDRESS CHARACTER PROGRAMMING

In the IDT terminals, it is necessary to change the programming of two bits from that used for the Phase II terminal.

M1 (bit 1) and M2 (bit 2) — These two bits must be programmed logic ONE (left) for the IDT terminal. Bit M1 is used to indicate the presence of special features. Bit M2 is used to indicate the presence of IDT features.

PROGRAMMING EXAMPLES

TRANSACTION TYPE MNEMONICS
Example 1 — Replacement. This example assumes: (1) all basic transaction type mnemonics in Sector "1" are to be replaced with the transaction type mnemonics in Sector "2," (2) the transaction type mnemonic is to be printed in the footer, and (3) the print column for the transaction type mnemonic is to be column 10.

For this example, the footer print control table in location 114-116 of Sector "0" is programmed as follows.

Loc.	Data	
	Binary	Octal
114	11010000	320
115	00000000	000
116	00000000	000

Bits 5, 6, and 7 of location 114 (101) identify the date field. Bits 1 through 4 specify the date field print column address as 0. Bit 8 being set (1) indicates that this is the last field in the footer. Therefore, only the date field is programmed to print. Since the transaction type field is not programmed in the footer table, the basic transaction mnemonics in Sector "1" are not used and do not have to be considered when programming the Sector "2" transaction type mnemonics.

The replacement transaction type mnemonics are programmed into Sector "2." It should be noted that, in this example, the opportunity exists to not only replace the existing basic transaction type mnemonics but also to program mnemonics for qualification codes which do not have basic mnemonics.

The print column address for the Sector "2" transaction type mnemonics is programmed in location 374, Sector 2, as 00001010 (octal 012). Bits 1 through 5 specify a print column address of

10. Bit 8 being reset (0) causes the mnemonic to be printed in the footer.

In all programming of transaction type mnemonics, care must be taken to ensure that the mnemonic does not overlap the amount field. The amount print column address is programmed in location 117, Sector "0" (word 26). See MS-5061.

Example 2 — Partial Replacement. This example assumes that (1) the basic transaction type mnemonic CHG is to be replaced, (2) all other basic transaction type mnemonics are to remain unchanged, and (3) the basic transaction mnemonics are programmed to print in the footer with a print column address of 10.

Table D-1 shows that the sequence number of the CHG mnemonic in Sector "1" is 14. Because the CHG mnemonic is to be replaced, the sequence number 14 mnemonic in Sector "1" must be programmed as a one character "space" (octal 240).

Replacement mnemonics for those qualification codes using the basic CHG mnemonic are then programmed into Sector "2." All qualification codes which have other basic mnemonics in Sector "1" must have a "space" programmed in the proper sequence in Sector "2." However, it is possible in this example to program mnemonics in Sector "2" for qualification codes which do not have basic mnemonics.

Since a basic mnemonic is to be replaced, the print column address for the Sector "2" transaction mnemonics must be programmed to be the same as that for the basic mnemonic. Therefore, location 374, Sector "2," is programmed 00001010 (octal 012). Bits 1 through 5 specify a print column address of 10. Bit 8 being reset (0) causes the Sector "2" mnemonic to print in the footer.

Because the CHG mnemonic in Sector "1" is replaced by an ASCII "space" character, all mnemonics programmed in Sector "2" to replace the CHG mnemonic must have a "space" programmed as the first character of the mnemonic. This is required because the basic transaction type mnemonic is the last field loaded into the printer buffer and will cancel the first Sector "2" mnemonic character. The result is as follows.

Print Column	10 11 12 13 14 15 16 17 18 19
Basic Footer Programming	6 "SP"
Sector "2" Programming	6 "SP" B N K C H G
Printout	6 B N K C H G

With the first character of the Sector "2" mnemonic programmed "space," the basic Sector "1" "space" cancels the Sector "2" "space" and does not affect the mnemonic. The only deviation from a normal printout in this example is that two spaces occur between the qualification code number and the mnemonic.

Example 3 — Expansion. This example assures that (1) the Sector "2" transaction type mnemonics are to be used to expand the basic transaction type mnemonics in Sector "1" and (2) the basic transaction mnemonics in Sector "1" are programmed to print in the footer with a print column address of 10.

Since both the basic and Sector "2" transaction type mnemonics are operable in this example, care must be taken in selecting the print column address for the Sector "2" mnemonics to obtain the desired printout.

Assume for the purpose of this example that the basic CHG mnemonic for qualification code 7 is to be expanded to CHG BNK. The mnemonic BNK is then programmed in the proper sequence for qualification code 7 in Sector "2." Location 374, Sector 2, is programmed 00001110 (octal 016).

Bits 1 through 5 specify a print column address of 14 for the Sector "2" transaction type menmonics. Bit 8 being reset (0) causes the mnemonic to be printed in the footer. The result is then as follows.

Print Column	10 11 12 13 14 15 16 17 18
Basic Footer Programming	7 C H G
Sector "2" Programming	7 B N K
Printout	7 C H G B N K

Because the basic transaction type mnemonic in Sector "1" is loaded into the printer buffer after the Sector "2" mnemonic, the "G" in column 14 cancels the "7."

With column 14 programmed as the print address for the Sector "2" transaction type mnemonics, basic mnemonics with two digit qualification codes may also be expanded.

Print Column	10 11 12 13 14 15 16 17 18 19 20
Basic Footer Programming	3 0 C S H
Sector "2" Programming	3 0 E X C H
Printout	3 0 C S H E X C H

It should be noted that only basic transaction mnemonics with three characters can be expanded in this example. In any situation, all basic mnemonics to be expanded must contain the same number of characters.

DEPARTMENT MNEMONICS

Example 1 — Print on Separate Line. This example assumes: (1) the department mnemonic is to be printed on the line following the item information, and (2) the print column address for the department mnemonic is 6.

For this example, bits 1 through 5 of location 210, Sector "0," are programmed 00110 which provides a print column address of 6. Also bit 4 of location 211, Sector "0," is programmed set (1) which causes the department mnemonic and price to print on the line following the item information.

The department mnemonics are then programmed into any unused locations in Sector "2." Since the mnemonic is being printed on a separate line, the only restriction on the length of the mnemonic is that it does not overlap the price field.

The fourth characters of the department table entries in Sector "2" are programmed to specify the address (in octal) of the desired department mnemonics. See Figure D-5.

Transaction type mnemonics may also be programmed in Sector "2" with the department mnemonics. If transaction type mnemonics are used, location 374, Sector "2," is programmed to indicate the print column address. If transaction type mnemonics are not used, location 374, Sector "2," is programmed 00011111 (octal 037). Bits 1 through 5 specify a print address of 31 which is illegal and program out transaction type mnemonics in Sector "2." Bits 6 and 7 must be reset (0) and bit 8 is "don't care."

Assuming that the department mnemonic is SHOES for department number 529, a printout for this example could be as follows.

Print Column	0	4	7	14	21	27
	529	10	634025	1.00		MDS
			SHOES		15.99	

Example 2 — Print on Same Line. This examples assumes: (1) the department mnemonic is to be printed in place of the first two item information fields, e.g., department number and class number, and (2) the first two item information fields occupy a maximum of six print columns.

For this example, bits 1 through 5 of location 210, Sector "0," are programmed 00000 which provides a print column address of 0. Bit 4 of location 211, Sector "0," is programmed reset (0) which causes the department mnemonic to print on the same line as the item information.

The department mnemonics are then programmed into any unused locations in Sector "2." Since the mnemonic is to replace the first two item information fields (maximum of six print columns), each department mnemonic programmed must contain six characters. If the the mnemonic contains less than six characters, ASCII "spaces" must be programmed into locations following the mnemonic until six characters are included. An example of department mnemonic programming in Sector "2" for this situation is as follows.

Loc.	Octal Data	Character
210	101	A
211	125	U
212	124	T
213	117	O
214	040	"SP"
215	240	"SP"

The fourth character of the department table entries in Sector "2" are programmed to specify the address (in octal) of the desired department mnemonics. See Figure D-5.

Transaction type mnemonics may also be programmed in Sector "2" with the department mnemonics. If transaction type mnemonics are used, location 374, Sector "2" is programmed to indicate the print column address. If transaction type menmonics are not used, location 374, Sector "2" is programmed 00011111 (octal 037). Bits 1 through 5 specify a print address of 31 which is illegal and programs out transaction type mnemonics in Sector "2." Bits 6 and 7 must be reset (0) and bit 8 is "don't care."

Assuming that the department mnemonic is AUTO, a printout for this example could be as follows.

Print Column	0	7	14	21	27
	AUTO	634025	1.00	15.99	MDS

With the exception of the price field, the department mnemonic is the last item information field loaded into the printer buffer. Therefore, the department mnemonic will cancel any other item information characters programmed for the same print columns. The mnemonic AUTO occupies only the first four print columns (0 through 3).

The two "spaces" programmed with the mnemonic will prevent the printing of other information in print columns 4 and 5.

For departments which do not have assigned mnemonics, the first two item information fields will be included in the printout.

EXPANDED DEPARTMENT MNEMONICS

The programming of expanded department mnemonics is the same as that described for department mnemonics with the following exceptions.

1. Location 374, Sector "2" must be programmed all 1's (octal 377).

2. Expanded department mnemonics may be programmed into both Sectors "1" and "2."

3. The department table is programmed as shown in Figure D-7.

MNEMONICS PROGRAMMING SUMMARY

For reference, tables D-7 through D-10 summarize the rules for use of core space in Sectors "1" and "2" when programming transaction type mnemonics (tables D-7 and D-8) or expanded department mnemonics (tables D-9 and D-10).

Loc.	Data	Content		
0 0 0	1 1 5	M		
0 0 1	1 0 4	D	01	
0 0 2	3 2 3	S		
0 0 3	1 2 2	R		
0 0 4	1 2 4	T	02	
0 0 5	3 1 6	N	Basic Mnemonics	
.		May be expanded beyond location 151 to start of cassette label or through location 227 if cassette is not used.		
.		The number and sequence of the basis mnemonics cannot be changed.		
1 4 2	1 1 6	N		
1 4 3	0 5 7	/		
1 4 4	1 2 3	S	33	
1 4 5	3 1 4	L		
1 4 6	1 1 6	N		
1 4 7	0 5 7	/		
1 5 0	1 1 5	M	34	
1 5 1	3 0 4	D		
1 5 2		Basic Mnemonics Expansion		
2 0 1	1 1 0	Cassette Label		
2 0 2	0 7 0	If cassette is used, label must consist of at least one character. May start in any location following basic mnemonics. Must end in location 216.		
2 1 6	0 6 3			
2 1 7	2 0 1	Cassette Label Starting Address		
2 2 0		Not Used		
2 2 7		These locations cannot be used when a cassette label is programmed.		
2 3 0	0 0 5	Print Column Address For Inquiry Transaction Total Mnemonic		
2 3 1	2 0 2	Print Column Address For Closing Transaction Total Number		
.		Remainder Of Sector "1" Same As Phase II		

Table D-7 Transaction type mnemonics, sector "1"

Loc.	Data	Content
0 0 0	1 0 3	C For qualification code 0.
0 0 1	1 1 0	H No basic mnemonic in
0 0 2	3 0 7	G Sector "1".
0 0 3	2 4 0	For qualification code 1. An ASCII "space" indicates mnemonic is not desired for this qualification code or basic mnemonic in Sector "1" is used.
. . .		
1 4 5	0 4 0	For qualification code 33.
1 4 6	1 0 3	C
1 4 7	1 0 7	G Basic mnemonic in
1 5 0	0 4 0	E Sector "1" is
1 5 1	1 0 5	X programmed "space."
1 5 2	3 3 0	
. . .		
2 0 0	2 4 0	For qualification code 47. No basic mnemonic in Sector "1".
2 0 1	1 1 1	I
2 0 2	1 1 6	N
2 0 3	1 0 6	F
2 0 4	1 0 1	A
2 0 5	1 1 6	N
2 0 6	1 2 4	T
2 0 7	3 2 3	S
. . .		
2 4 1	0 0 0	Not Used - Must be all 0's.
. . .		
2 6 4	1 2 3	S
2 6 5	1 2 0	P
2 6 6	1 1 7	O
2 6 7	1 2 2	R
2 7 0	1 2 4	T
2 7 1	3 2 3	S
2 7 2	0 0 0	Department No. 1.
2 7 3	0 0 1	Total No. 1.
2 7 4	0 0 1	No mnemonic.
. . .		
3 7 0	0 1 0	Department No. 8FF (800-899).
3 7 1	3 7 7	
3 7 2	2 2 3	Total No. 19.
3 7 3	2 6 4	Mnemonic is SPORTS.
3 7 4	0 1 6	Transaction Mnemonics Print Column Address
3 7 5	2 7 2	Department Table Starting Address
3 7 6		Core Check Digit
3 7 7		Sector Control

Transaction Type Mnemonics

Must start in location 000.

Forty mnemonics or "spaces" must be programmed.

Mnemonics must be in order of qualification codes 0 through 47 (octal).

May continue to start of department mnemonics or to start of department table if department mnemonics are not used. Cannot go beyond location 240.

Department Mnemonics

May be located in any unused locations in Sector "2."

May be located on either side of location 241 but cannot be split by this location.

Department Table

May start in any location following transaction type mnemonics or department mnemonics.

Table must end in location 373 unless last entry is miscellaneous total (FFFF).

Table D-8 Transaction type mnemonics, sector "2"

Loc.			Data			Content		
0	0	0	1	1	5	M		
0	0	1	1	0	4	D	01	
0	0	2	3	2	3	S		
0	0	3	1	2	2	R		
0	0	4	1	2	4	T	02	**Basic Mnemonics**
0	0	5	3	1	6	N		
	.							May be expanded beyond location 151 up to start of expanded department mnemonics.
	.							
1	4	2	1	1	6	N		The number and sequence of the basic mnemonics cannot be changed.
1	4	3	0	5	7	/		
1	4	4	1	2	3	S	33	
1	4	5	3	1	4	L		
1	4	6	1	1	6	N		
1	4	7	0	5	7	/		
1	5	0	1	1	5	M	34	
1	5	1	3	0	4	D		
1	5	2	1	2	7	W		
1	5	3	1	0	1	A		
1	5	4	1	2	2	R	35	**Expanded Department Mnemonics**
1	5	5	3	0	5	E		
								Must start immediately following basic mnemonics.
	.							May continue to start of cassette label or through location 227 if cassette is not used.
1	7	4	1	2	3	S		
1	7	5	1	1	0	H		Must be assigned sequence numbers consecutive with those of basic mnemonics.
1	7	6	1	1	7	O	39	
1	7	7	1	0	5	E		
2	0	0	3	2	3	S		
2	0	1	1	1	0			**Cassette Label**
2	0	2	0	7	0			If cassette is used, label must consist of at least one character.
	.							
	.							
2	1	6	0	6	3			May start in any location following expanded department mnemonics. Must end in location 216.
2	1	7	2	0	1			**Cassette Label Starting Address**
2	2	0						
2	2	1						
2	2	2						**Not Used**
2	2	3						
2	2	4						These locations cannot be used when a cassette label is programmed.
2	2	5						
2	2	6						
2	2	7						
2	3	0	0	0	6			**Print Column Address For Inquiry Transaction Total Mnemonic**
2	3	1	2	0	2			**Print Column Address For Closing Transaction Total Number**
								Remainder of Sector "1" Same As Phase II

Table D-9 Expanded department mnemonics, sector "1"

Loc.	Data	Content
0 0 0	1 2 3	S
0 0 1	1 2 5	U
0 0 2	1 1 1	I 01
0 0 3	1 2 4	T
0 0 4	3 2 3	S
0 0 5	1 1 0	H
0 0 6	1 0 1	A
0 0 7	1 2 2	R 02 **Expanded Department Mnemonics**
0 1 0	3 0 4	D
		Must start at location 000.
.		
.		May continue up to start of department table or through location 240. Cannot go
2 0 1	1 1 4	L beyond location 240.
2 0 2	1 0 1	A
2 0 3	1 0 4	D 22
2 0 4	1 1 1	I
2 0 5	1 0 5	E
2 0 6	3 2 3	S
.		
.		
2 3 6	0 0 0	Department No. 1.
2 3 7	0 0 1	Total No. 1.
2 4 0	2 0 1	
2 4 1	0 0 0	Not Used — Must be all 0's. **Department Table**
2 4 2	1 0 2	Mnemonic is HARDWARE.
2 4 3	2 4 3	May start in any location following expanded department mnemonics.
2 4 4	0 0 0	Department No. 10.
2 4 5	0 2 0	Total No. 2. Location 241 cannot be used but single
2 4 6	3 0 2	entry may be programmed around this
2 4 7	0 0 1	Mnemonic is SUITS. location.
.		Table must end in location 373 unless last
.		entry is miscellaneous total (FFFF).
3 6 7	0 0 1	Department No. 999.
3 .7 0	2 3 1	Total No. 21.
3 7 1	3 2 5	
3 7 2	3 4 7	Mnemonic is SHOES/LADIES.
3 7 3	1 2 6	
3 7 4	3 7 7	**Transaction Mnemonics Print Address** Must be programmed 377 when expanded department mnemonics used.
3 7 5	2 3 6	**Department Table Starting Address**
3 7 6		**Core Check Digit**
3 7 7		**Sector Control**

Table D-10 Expanded department mnemonics, sector "2"

SECTION E
DATA COLLECTION

DATA MESSAGE FORMAT

MERCHANDISE TRANSACTION FORMAT

This message format, shown in Figure E-1, differs from the Phase II format because of the transmission of the selective communication hash total at the end of the transaction and changing of the maximum size of nonmonetary data fields from 13 to 14 digits.

NON-SALE, RE-ENTRY, AND PROGRAMMING FORMAT

This message format remains the same as that shown for the Phase II terminal.

VOID TRANSACTION FORMAT

This message format differs from the Phase II format only because of the change in the maximum field size of the voided transaction number from 13 to 14 digits. See Figure E-2.

CASHIER OR CLERK OPENING TRANSACTION FORMAT

This message format remains the same as that shown for the Phase II terminal.

CLOSING TRANSACTION FORMAT

The closing transaction format, shown in Figure E-3, has been modified to include the transmission of control, transaction and summary totals if the totals are read or reset.

RE-ENTERED, RECEIVE ON ACCOUNT, AND CREDIT AUTHORIZATION TRANSACTION FORMATS

These message formats remain the same as those shown for the Phase II terminal.

DIAGNOSTIC TRANSACTION HEADER

The data messages transferred during the test transaction phase of the diagnostic mode are not written on tape for data collection. The repeated header transferred during this phase of diagnostic begins with an S0 (shift out) ASCII character. The SO character informs the software not to write the message on tape. By error, this format was not included in Phase II manual MS-5061. The form for the Phase II and IDT terminals is the same. See Figure E-4.

INQUIRY TRANSACTION FORMAT

For a totals inquiry (qualification code 46) transaction, any total that is reset will be transmitted the data collector in the format shown in Figure E-5.

HEADER

F S	Store No. 4	Term No. 4	Trans. No. 4	R S

Repeated for each message segment transferred.

All field sizes in the above portion of the header are constant at four digits each (zero fill is used) and are not contained in the data collect buffer.

Media No. 4	U S	Qual. Code 2	U S	Operator ID 6	G S

MERCHANDISE DATA

Format Code 2	U S	Dept. No.* 14	U S	Class No. 14	U S	Mdse. No. 14	U S	M-Data 14	U S	Qty. 4	U S	Price 8	U S	Item Code 1	R S

A merchandise data sequence similar to the one above is repeated for each item. The sequence in which department, class, and merchandise number appear is determined through programming. When a data field is skipped a US is inserted in its place.

* If the X key is pressed at the first merchandise word (DEPT.) the 280 initiates a miscellaneous data sequence and loads BB into the data collect buffer. Pressing the /FOR key during this sequence causes a US to be loaded. Pressing the ENTER key inserts a US and RS and causes the unit to exit from the miscellaneous data field. This format is shown below. Transmission may occur if buffer full.

B	B	M-Data 14	U S	R S

X key pressed   ENTER key pressed

NONMERCHANDISE AND TAX DATA

G S	ID Code 1	U S	Disc. ID 14	U S	Disc. Amt. 8	U S	Modifier Code 1	R S

Repeated if discount on both itemizers.

ID Code 1	U S	Fee Type 14	U S	Fee Amt. 8	U S	Modifier Code 1	R S

ID Code 1	U S	Misc. Cr. Type 14	U S	Misc. Cr. Amt. 8	U S	Modifier Code 1	R S

ID Code 1	U S	Deposit Amt. 8	U S	Modifier Code 1	R S

ID Code 1	U S	M-Data 14	U S	Modifier Code 1	R S

Tax Code 13	R S	Tax ID Code-9 1	U S	Tax Amt. 8	R S

If manual and auto. tax are entered, this segment is repeated with the first containing the manual tax amount.

* The first nonmerchandise or tax item entered is preceded by a GS.

If the END MDSE END RETURNS key is used to return to the merchandise data sequence a US is inserted after the GS or RS. The END MDSE END RETURNS key is locked out after a discount. Discount is locked out after a deposit.

END TRANSACTION

G S	Total 8	U S	Hash Total 8	R S	Account No. 14	U S	Credit Authorization Code 1	R S	F S

End transaction segment with account number.

G S	Total 8	U S	Hash Total 8	R S	Account No. 14	U S	F S

If no Credit Authorization.

G S	Total 8	U S	Hash Total 8	R S	F S

End transaction segment without account number.

Figure E-1 Merchandise transaction format

Figure E-2 Void transaction format

F S	Store No. 4	Term. No. 4	Trans. No. 4	R S

Media No. 4	U S	Qual. Code 2	U S	Operator ID No. 6	G S

Trans. No. Voided 14	G S	F S

Figure E-2 Void transaction format

Figure E-3 Closing transaction format

F S	Store No. 4	Term. No. 4	Trans. No. 4	R S

Media No. 4	U S	Qual. Code 2	U S	Operator ID No. 6	G S

Qty. 4	U S	Amount 8	U S	Modifier Code 1	R S

U S *	G S	Control, Transaction, or Summary Total No. 2	U S	Total Amount 10	R S

Control Transaction, or Summary Total No. 2	U S	Total Amount 10	R S

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Cash Total 10	U S	Sales Total 10	U S	Return Total 10	U S	F S

*Present only if totals are reset.
**Present only if totals are read or reset

Figure E-3 Closing transaction format

Figure E-4 Diagnostic test transaction repeated header message

S O 1	Store No. 4	Term. No. 4	Trans. No. 4	R S 1

Figure E-4 Diagnostic test transaction repeated header message

Figure E-5 Inquiry transaction format

F S	Store No. 4	Term. No. 4	Trans. No. 4	R S

Media No. 4	U S	Qual. Code 2	U S	Operator ID No. 6	G S

Dept. Total Number 2	U S	Total Amount 8	R S

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Dept. Total Number 2	U S	Total Amount 8	R S	F S

Figure E-5 Inquiry transaction format